

**DETERMINANTS OF CUSTOMERS' INTENTION TO USE ELECTRONIC  
PAYMENT SERVICES: EVIDENCE FROM ADDIS ABABA**

**Yaboneh Bonge**



A Research Paper Submitted to  
College of Business and Economics School of Commerce

Presented in Partial Fulfillment of the Requirements for Master of Arts  
Degree in Marketing Management

**Advisor: Hailemariam Kebede (PhD)**

Addis Ababa University School of Commerce  
Addis Ababa, Ethiopia  
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## Declaration

I, the undersigned, hereby declare that the work contained in this thesis titled “*Determinants of Customers’ Intention to Use E-Payment Services: Evidences from Addis Ababa*” is my own original work and that I have not previously in its entirety or in part submitted at any university for a degree.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Signature Page

**Addis Ababa University**  
**School of Graduate Studies**

This is to certify that the thesis prepared by Yaboneh Bonge, entitled: “Determinants of Customers’ Intention to Use E-Payment Services: Evidences from Addis Ababa” submitted in partial fulfillment of the requirements for the degree of Master of Arts in Marketing Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Chair of Department or Graduate Program Coordinator

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# Table of Contents

Declaration.....	I
Acknowledgements.....	III
Table of Contents.....	IV
List of Abbreviations and Acronyms.....	VII
List of Tables.....	VIII
List of Figures.....	IX
Abstract.....	X
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1. Background of the Study.....	1
1.2. Statement of the Problem.....	4
1.3. Basic Research Questions.....	6
1.4. Objectives of the Study.....	6
1.4.1. General Objective.....	6
1.4.2. Specific Objectives.....	6
1.5. Definition of Terms.....	7
1.5.1. Operational Definition.....	7
1.6. Hypotheses of the Study.....	8
1.7. Significance of the Study.....	9
1.8. Delimitation/Scope of the Study.....	9
1.9. Limitations of the Study.....	10
1.10. Organization of the Study.....	10
CHAPTER TWO.....	12
REVIEW OF RELATED LITERATURE.....	12
2.1. Introduction.....	12
2.2. Theoretical Review.....	12
2.2.1. Defining E-Payment.....	12
2.2.2. The Concept of E-Commerce and E-Payment.....	12
2.2.3. Types of E-payment.....	13

2.2.4.	E-Payment in Africa .....	14
2.2.5.	Related Theories and Models.....	15
2.2.6.	Theory of Reasoned Action (TRA).....	15
2.2.7.	The Theory of Planned Behavior (TPB).....	16
2.2.8.	Technology Acceptance Model (TAM).....	16
2.2.9.	Innovation Diffusion Theory (IDT) .....	17
2.2.10.	The Unified Theory of Acceptance and Use of Technology (UTAUT) .....	18
2.2.11.	Extended Unified Theory of Acceptance and Use of Technology (UTAUT2) .....	19
2.3.	Empirical Review and Hypothesis Development.....	19
2.4.	Conceptual Framework .....	29
CHAPTER THREE .....		30
RESEARCH DESIGN AND METHODOLOGY .....		30
3.1.	Introduction .....	30
3.1.	Research Design.....	30
3.1.1.	Research Approach.....	30
3.1.2.	Research Methods.....	30
3.2.	Sampling Design .....	31
3.2.1.	Target Population .....	31
3.2.2.	Sampling Technique .....	31
3.2.3.	Sampling Procedure and Sample Size .....	32
3.3.	Types, Source, Instrument and Methods of Data Collection .....	33
3.3.1.	Types of Data Collected .....	33
3.3.2.	Sources of Data.....	33
3.3.3.	Data Collection Instrument.....	33
3.3.4.	Method/Procedures of Data Collection .....	34
3.4.	Data Analysis Methods .....	34
3.5.	Test of Validity and Reliability .....	35
3.5.1.	Test of Validity .....	35
3.5.2.	Reliability .....	36
3.6.	Ethical Considerations.....	37

CHAPTER FOUR.....	38
DATA PRESENTATION, ANALYSIS, AND INTERPRETATION .....	38
4.1. Introduction .....	38
4.2. Response Rate of Data .....	38
4.3. Data Screening and Cleaning .....	38
4.4. Demographic Profiles of Respondents.....	39
4.5. Likert Scale Values and Analysis of Aggregated Responses.....	41
4.6. Summary of Average Responses to Likert Scale Items .....	44
4.7. Relationship Between Independent and Dependent Variables .....	45
4.8. Test of Distributions of Data (Normality).....	46
4.8. Test of Extreme Relationship Among Independent Variables.....	48
4.9. Test of Equal Variance of Variable.....	49
4.10. Determinants of Customers’ Intention to Use E-Payment Services.....	50
4.11. Hypothesis Testing .....	52
4.12. Summary of Hypothesis Testing Results.....	56
CHAPTER FIVE .....	58
SUMMARY OF MAJOR FINDINGS, CONCLUSION, AND RECOMMENDATIONS .....	58
5.1. Introduction .....	58
5.2. Summary of Major Findings .....	58
5.3. Conclusion.....	59
5.4. Recommendations .....	61
5.5. Suggestions for Future Research.....	62
References.....	64
ANNEX A	
ANNEX B	

## **List of Abbreviations and Acronyms**

ANOVA = Analysis of Variance

AW = Awareness

DIT = Diffusion of Innovation Theory

EE = Effort Expectancy

E-Payment = Electronic Payment

FC = Facilitating Conditions

ICT = Information Communications Technology

IS = Information System

MM = Motivation Model

TPCU = Theory of PC Utilization

PC = Perceived Credibility

PE = Performance Expectancy

PV = Price Value

SI = Social Influence

SPSS = Statistical Package for Social Science

TAM = Technology Acceptance Model

TPB = Theory of Planned Behavior

TRA = Theory of Reasoned Action

UTAUT = Unified Theory of Acceptance and Use of Technology

## List of Tables

Table 4. 1 Questionnaire response rate .....	38
Table 4. 2 Demographic profiles of respondents .....	39
Table 4. 3 Likert scale items and aggregated responses .....	41
Table 4. 4 Summary of Likert scale items and aggregated responses .....	44
Table 4. 5 Matrix of relationship between independent and dependent variables .....	45
Table 4. 6 Test of normality of data.....	46
Table 4. 7 Test of extreme relationship among variables .....	48
Table 4. 8 Predicting power of the model used .....	50
Table 4. 9 Significance of model used (Analysis of Variance - ANOVA).....	51
Table 4. 10 Effects of independent variables on customers' e-payment use intention .....	51
Table 4. 11 Summary of hypothesis testing results .....	57

## List of Figures

Figure 2. 1 Model of Theory of Reasoned Action .....	15
Figure 2. 2 Model of Theory of Planned Behavior .....	16
Figure 2. 3 Technology Acceptance Model .....	17
Figure 2. 4 Model of Unified Theory of Acceptance and Use of Technology .....	18
Figure 2. 5 Model of Extended Unified Theory of Acceptance and Use of Technology..	19
Figure 2. 6 Conceptual framework .....	29
Figure 4. 1 Normal probability plot	47
Figure 4. 2 Scatter plot for testing Equal variance	49

## **Abstract**

*The purpose of this thesis was to investigate factors that determine the intention of users or consumers in Addis Ababa towards using electronic payment services, using the deductive approach by adapting and testing the Extended Unified Theory of Acceptance and Use of Technology (UTAUT2) with a rational substitution of Habit by Image, to quantitatively examine the relationship between the independent and dependent variables. Explanatory and descriptive research designs were used to identify the determinants of users' intention to use e-payment services. A sample of 385 respondents from Addis Ababa were selected using the convenience sampling techniques and primary data were collected using survey questionnaires. The data obtained were analyzed quantitatively by both inferential and descriptive statistics using the Statistician Software for Social Sciences (SPSS) version 25. The findings of the analysis revealed that all the variables were positively correlated with each other and performance expectancy, facilitating conditions, price value, and image were statistically significant and positively influenced the intention of customers to e-payment services, whereas effort expectancy, social influence, and hedonic motivation were statistically insignificant. The study concluded that all the seven factors used in the study predicted 39.4 percent of the variance in the customers' intention of using e-payment services and that users/customers intend to use e-payment systems because of the benefits they assume to derive from the services, the comparatively lower associated costs, the availability of facilitating situations and the assumed higher social status in the society. The study recommends e-payment service providers to integrate more features and services to their e-payment systems, ease the procedures of using the services and teach their customers on how to use the systems. The government organs should facilitate the introduction and expansion of e-payment service by creating proper legal platforms and providing infrastructure.*

**Keywords:** *e-payment, behavioral intention, performance expectancy, effort expectancy, social influence, facilitating conditions, price value, hedonic motivation, image.*

## CHAPTER ONE

### INTRODUCTION

#### 1.1. Background of the Study

The current digital technologies have dramatically shifted the multifaceted nature of global interactions into totally different arenas nowadays with the advent of modern computer and information and communications technologies (ICT). Most of the current global transactions are replacing much of the physical process, with the help of cashless technologies, especially in the advanced economies with the introduction of e-commerce. This leads us to the analogy that ‘as payment is a core part of the mercantile process, an electronic payment system is an integral part of e-commerce’ (Sumanjeet, 2009).

According to Rachna and Singh (2013), an electronic payment (e-payment) system is described as the settlement of payments virtually using the available telecom networks such as the Internet, mobile USSD, short messaging services (SMS), and other wireless technologies, without physical involvement of the traditional provision of value in cash or in-kind in exchange for the receipt of goods or services. Said another way, “*we can say that e-payment is a method in which a person can make online payments for his [or her] purchase of goods and services without the physical transfer of cash and cheques, irrespective of time and location*” (Rachna and Singh, 2013, p. 25).

Even though it gets frequently updated through time depending on the emergence of newly developed e-payment options, the general concept of e-payment currently encompasses all transactions that exclude the physical transfer of the paper money (i.e. cash, checks, etc.) and/or its metallic denominations, replacing them by the electronic means. Humphrey (2001) noted that, generally, the implementation of e-payment involves the use of computer networks such as the Internet and digitally stored value systems which allow bills to be paid directly from bank accounts, without the account holder being present at the bank, and without the need of writing and mailing cheques.

Humphrey (2001) further states that many new payment services have come into existence in recent years, most of which are based on technical innovations such as card, telephone,

and the Internet. Different scholars focus differently on the sorting of the e-payment types based on their own perspectives. For example, Rachna and Singh divide them into two distinct types namely, Internet-based payment system and the electronic transaction-based payment systems in which the former involves e-cash, credit card, debit card, smart card, etc., while the latter consists of secure electronic transaction, cybercash, net bill, first virtual holdings, etc. (Rachna and Singh, 2013).

Many scholars have agreed upon the critical impacts of the adoption of not just the e-payment systems, but also the entire digital platforms in reshaping people's entire lifestyles both negatively and positively. Unlike the virtual payment mechanism, the conventional payment systems are condemned for lacking usability, security, efficiency, consistency, and being costliness by researchers like Kaur and Pathak (2015). On the contrary, e-payment systems enable faster payment, better tracking of transactions as well as transparency, saving time, inducing cost savings, and promoting trusting relationships between buyers and sellers (Wondwossen and Tsegai, 2005; Mang'ana and Katundu, 2018).

As different literature indicate that electronic payment systems are more expanded in the western economies where all the requirements are comparatively in place, they are also defusing to the growing economies such as some African nations. The World Bank's report of 2016, in its Global Findex data, shows that there is a growth in account penetration of 13% in developing economies and innovations in technology, particularly mobile money, which is helping to rapidly expand access to financial services in Sub-Saharan Africa. The report further shows that big opportunities remain to increase financial inclusion, especially among women and poor people (Demirgukunt, et al., 2015; The World Bank Group, 2016).

In spite of the fact that Ethiopia has not yet publicly laid down the legal platform for the adoption and utilization of e-commerce and e-payment, there are some practices that the people are already utilizing the e-payment options that are launched by the financial institutions such as the commercial banks and the only telecom operator through mobile banking, mobile wallets, internet banking, card banking, electronic mobile airtime top-up, and electronic mobile voucher cards, monthly telecom bill settlement, and so on

(Wondwossen and Tsegai, 2005). Besides, the government of Ethiopia currently seems to pave the way for the introductions of e-commerce and e-payment, as witnessed from the recent visit of Twitter's Jack Dorsey (the chairman), and Jack Ma (Alibaba's founder and chairman) who are leaders of companies that are globally reputed for using e-transaction-based systems (Getachew, 2019), meanwhile inaugurating the Electronic World Trade Platform (eWTP) in Ethiopia and the crafting of a draft e-transaction legislation.

The country's interest in adapting e-payment technology can also be inferred from the fact that private and public colleges that have been offering courses in information and communication technology are mushrooming, which is arming the trainees with the necessary skills and capacity to operate in the ICT environment and will play a crucial role in creating a society with knowledge of ICT (Wondwossen and Tsegai, 2005).

The current global health crisis that has resulted from the Coronavirus pandemic (COVID-19) is also enforcing the financial institutions in Ethiopia such as banks to encourage their customers to shift from the traditional bricks-and-mortar means of making transactions like withdrawal and transfer of money, making payments for different purchases, that involved the physical presence and contact among people to the virtual or digital options such as mobile banking, internet banking, electronic bill payments, etc. Some of these institutions have been urging their customers even by lifting the commission fees that used to be collected from electronic transactions by customers to ensure safety by reducing the probability of contaminations by the virus during physical contacts.

There are various factors for consumers to accept or resist new technology. Several models have been developed by different scholars through time for studying people's behavior of accepting and using new ways of doing things such as new technologies like the electronic payments systems. Among the notable theory or models are: Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 2010), Technology Acceptance Model (TAM) by Davis (1985), Theory of Planned Behavior (TPB) (Ajzen, 2005), Diffusion of Innovation Theory (Rogers, 1983), etc., where the first theory (TRA) helped in remodeling the subsequent ones and a new theory called extended Unified Theory of Acceptance and Use of

Technology (UTAUT2), which was used in this study was suggested by Viswanath Venkatesh and his fellows since the year 2000 (Venkatesh, et al., 2003).

## **1.2. Statement of the Problem**

The findings of Wondwossen and Tsegai (2005) revealed that e-payment in most African countries is practiced in very low circumstances, if not inexistent at all in some countries of the continent. The major causes for this are attributed to the lack of infrastructure and proper legal and regulatory frameworks. E-payment infrastructure such as the Internet, the know-how, and the online databases are not being widely introduced in most African countries, except few nations such as South Africa, Tunisia, Morocco, and Egypt. These challenges are more prevalent in the rural parts of the nations such as Ethiopia, where most of the country's population reside (Wondwossen and Tsegai, 2005). A recent assessment by Tekabe and Gadise (2016) identified more issues beyond infrastructure including the language barriers (interface languages being foreign and more technical), system disruptions, etc. The other major problem identified by previous studies is related to security issues of cyber-attacks targeted on hacking financial institutions' systems.

The banks in the country are still operating with the traditional ways with the physical cash at their center and focusing on expanding physical branches, although improvements are being observed regarding the expansion of mobile banking, card banking, and internet banking services as ways of e-payment options (Gardachew, 2008). Compared to Safaricom of Kenya, the sole telecom operator in Ethiopia, Ethio telecom, has not yet been granted a privilege to engage in the financial sector, which has made the financial sector in Ethiopia dominated by banks and few credit and saving institutions (Fox, 2018).

Almost business centers such supermarkets, hotels, etc. that are operating in the major cities are not willing to collect payments with the available e-payment options such as point of sales devices provided by the financial institutions, which are usually non-functional. With the perception that the formal financial service providers such as banks are for the wealthier personalities, a sizeable proportion of the population is inclined to use the traditional financial services such as the local savings clubs, instead of going to save at the formal

institutions. This makes it very hard for the poor Ethiopians to utilize formalized financial transactions (Fox, 2018).

Moreover, some of the preceding studies reported opposing finding regarding effects of the factors they employed on technology acceptance. Venkatesh, et al. (2003), Chao (2019), and Huang and Kao (2015) found that social influence had a significant effect on new technology acceptance, while Oliveira et al. (2014) disproved this finding in their study on mobile banking arguing that some technologies developed to facilitate financial activities were personal, highly sensitive, and involve confidential information and, thus, social influence was insignificant in this regard

Most importantly, studies show that is difficult to be certain about peoples' behaviors based on a one-time finding, as behaviors are dynamic by nature and similar studies conducted on similar populations at different times may result in different findings. Belk (2006)'s, longitudinal study book noted that people change their previous preferences with the advent of new technologies and as they get more details of that innovation. Thus, this paper intended to identify whether there were changes in people's intentions regarding the constructs used by previously conducted research.

The writer of this paper has identified some research gaps in previous studies in relation to the subject area that earlier studies focused on specific e-payment systems such as mobile banking, internet banking, or card banking separately. This research, however, tried to focus on the general view of electronic payment systems rather than narrowly focusing on just a specific service, with a particular focus in Addis Ababa. In addition, prior studies used older theories such as Technology Acceptance Model (TAM), the Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), and Diffusion of Innovation Theory, that have at least 25 years. The most recent study was conducted by Samuel (2019) on the Adoption of Mobile Banking service which was conducted based on the Unified Theory of Acceptance and Use of Technology (UTAUT) of Venkatesh, et al. (2003).

Therefore, apart from the prior studies, this study used the latest model called Extended Unified Theory of Acceptance and Use of Technology (UTAUT2), which involved more unified factors, by rationally replacing one factor (Habit) an external factor (Image), as

Venkatesh, et al. (2012) suggested that the replaced variable was most likely influential in technologically advanced nations, where such users would develop a habit as technology has been highly penetrated for frequent usage.

### **1.3. Basic Research Questions**

This study focused on answering the main research question that enquires: “What are the factors that affect customers’ use of electronic payment services?”

The specific research questions of the study were:

1. What is the effect of performance expectancy on customer’s intention of using e-payment?
2. What is the effect of effort expectancy on the customer’s intention of using e-payment?
3. What is the effect of social influence on the customer’s intention of using e-payment?
4. What is the effect of facilitating conditions on the customer’s intention of using e-payment?
5. What is the effect of price value on the customer’s intention of using e-payment?
6. What is the effect of hedonic motivation on the customer’s intention of using e-payment?
7. What is the effect of image on the customer’s intention of using e-payment?

### **1.4. Objectives of the Study**

#### **1.4.1. General Objective**

The main objective of this study was to identify factors that influence the intention to use e-payment services in Addis Ababa.

#### **1.4.2. Specific Objectives**

The specific objectives of this study were to:

1. Examine the effect of performance expectancy on peoples’ intention to use e-payment services;
2. Determine the effect of effort expectancy on customers’ intention of using e-payment services;

3. Examine the effect of social influence on customers' intention of using e-payment services;
4. Evaluate the effect of facilitating conditions on customers' intention to use e-payment services;
5. Analyze the effect of price value on customers' intention of using e-payment services;
6. Investigate the effect of hedonic motivation on customers' intention to use e-payment services;
7. Examine the effect of image on customers' intention of using e-payment systems

## **1.5. Definition of Terms**

### **1.5.1. Operational Definition**

In this specific paper, the following terms held the operational meanings as indicated in the following manner.

**Customer:** According to Customers are individuals and businesses that purchase goods and/or services of a company (Bloomenthal, 2020). The term customer(s) used in this study as the target population of this research represents people who are potential e-payment services users who have the intention to use the services in the future and/or those who are currently using them and have the intention to continue using or to subscribe to more features of the services.

**Electronic payment (e-payment):** the term electronic payment was the payment and/or collection of components and processes that allows two or more parties to make transactions and exchange money virtually through a variety of electronic means using the available telecom networks such as the Internet, mobile USSD, short messaging services (SMS), electronic cards and other wireless technologies, without the physical involvement of the manual provision of value in cash or in-kind in exchange for the receipt of goods or services (Koponen, 2019; Rachna and Singh, 2013).

**Hedonic motivation (HM):** hedonic motivation derived its meaning from both the TAM2 and UTAUT2 models as an assumed enjoyment to gain the emotional satisfaction or psychological pleasure obtained from doing an action or behavior. In this context, it was

related to the extent to which pleasure was gained from using e-payment technologies like online shopping or gift transfer to friends or any other person (Patel and Connolly, 2017).

**Image:** the concept of image got the operational definition of the people's feelings that they would be seen as being unique or perceived as having a higher social status or social approval as if they were exclusively using a certain technology within the society they live in (Moore and Benbasat, 1991).

**Price value (PV):** The price value concept was related to the consumers of a technology who actually pay money for using the e-payment service. Thus, the term 'price value' served in this paper to mean the trade-off between benefits gained or the cost incurred by the users of the system for using e-payment options instead of cash or other physical payment methods (Venkatesh, et al., 2012; Jakkaew and Hemrungrote, 2017).

## **1.6. Hypotheses of the Study**

Based on the research questions and the objectives of the study, the following seven hypotheses were developed.

*H1. Performance expectancy has a significant influence on customers' intention to use e-payment services.*

*H2. Effort expectancy has a significant influence on customers' intention to use e-payment services.*

*H3. Social influence has a significant influence on customers' intention to use e-payment services.*

*H4. Facilitating conditions have a significant influence on customers' intention to use e-payment services.*

*H5. Price value has a significant influence on customers' intention to use e-payment services.*

*H6. Hedonic motivation has a significant influence on customers' intention to use e-payment services.*

*H7. Image has a significant influence customers' intention to use e-payment services.*

### **1.7. Significance of the Study**

One of the significances of this study goes to the authorized financial institutions such as banks in Ethiopia to consider introducing electronic payment options or optimizing their usage of the service (for those already started) for their business operations thereby enhancing their customer experiences by providing speedy and convenient customer services in utilizing the factors that will be recommended to be significant in this study. In addition, the study is expected to add value for the customers of the companies that intend to service via e-payment options, to identify what exactly drives them to choose the e-payment platforms in their transactions.

Further, this study was believed to help the relevant government body and policymakers of the nation to facilitate the adoption and expansion of different e-payment systems in Ethiopia to alleviate the drawbacks and risks associated with the use of the traditional mean of payments including designing and implementing relevant laws. Finally, it will assist the academicians to look for the uncovered areas by this study which was suggested as a future study area and it also helps them to use it as a reference for their future studies in similar contexts.

### **1.8. Delimitation/Scope of the Study**

This study was limited to the investigation of factors that are hypothesized to affect the customers' intention to use electronic payment systems including mobile, internet, card, and other wireless technologies. Furthermore, the study was confined to Addis Ababa since considering all the users across Ethiopia would be unmanageable to generate the desired results within the projected time, cost, experience, and other limits to the researcher.

Additionally, the constructs of the extended Unified Theory of Acceptance and Use of Technology (UTAUT2) model were the main model used in this study, as this model was thought to reasonably incorporate the constructs of the preceding theories of other scholars in addition to the one developed by Venkatesh himself and his colleagues in prior years. From the main constructs of the UTAUT2 model namely, Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Price Value, Hedonic Motivation, and Habit, the last construct was replaced by Image, because the disregarded factor was

assumed to have less significance for the cases in technologically poorer countries where the chance to develop a habit from technology (Venkatesh, et al., 2012) and the external construct was adapted from Moore and Benbasat (1991) and Venkatesh, et al. (2012), as it was assumed to be suitable for this study.

### **1.9. Limitations of the Study**

There were some cutoffs in conducting this study which might be inevitable due to some forces beyond the control of the writer of the paper, as they may be common in any research work. The study focused only on most of the factors that were sourced from one model of UTAUT2 that a future research with more predictive constructs may report different findings from this one. In addition, the population considered in the study was the people in Addis Ababa, which may not be a representative of the entire people of Ethiopia, as it was a smaller geographic scope given the population of the country, due to different limitation such as time, financial resources, as well as immature past experiences of the student researcher in doing such an extended researches.

The sampling technique used was convenience sampling, which might not give equal chance for the entire population to be represented in the study. Again, the study was based on survey questionnaires and primary data, due to the available time, capacity, and financial constraints. Further, the research was based on cross sectional study which depended on one-time data and the researcher believes that a longitudinal study on similar topic may report different findings, as some scholars suggest that people's behavior varies through time.

The other major challenge faced in the due course of this study was attributed to the global COVID-19 pandemic that it hindered the researcher from collecting data on time due to the stay-at-home order of the government. This in turn reduced the response rate, as some of the responses remained uncollected.

### **1.10. Organization of the Study**

This research paper incorporates five major parts (chapters) which are organized in such a way that the first part contains the background of the study, statement of the problem, the research questions, objectives, significance and scope, and limitation of the study. The

second chapter deals with reviewing the related literature that revolves around electronic payment systems and behavioral intention or adoption of such systems. This section consists of both theoretical and empirical studies and the conceptual framework used in the study. The third chapter is all about the methodologies implemented in the due course of the study including the research design and approach, the subjects of the study, the sources of data, the tools and procedures of data collection, and the methods of data analysis used. The fourth chapter talks about the analysis, interpretation, and presentation of the data collected, and finally, the last chapter is about the summary of major findings, conclusion, and recommendations for future action by the concerned bodies.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1. Introduction**

In this chapter, the reviewed sources including prior studies with similar themes with regard to electronic payments and related technology adoption behaviors of users will be presented.

#### **2.2. Theoretical Review**

##### **2.2.1. Defining E-Payment**

Different scholars have defined the term e-payment as a financial transaction made without the use of paper documents such as cheques. This mode of transaction is performed over an electronic network such as the internet, meaning, it is a method in which a person can make online payments for his purchase of goods and services without the physical transfer of cash and cheques, irrespective of time and location. The definition from the European Central Bank, in its first article of 2004 directives (Hartmann, 2006), has tried to include wider issues that might arise in the future, giving the definition as electronic money shall mean monetary values as represented by a claim on the issuer which is: (i) stored on an electronic device, (ii) issued on receipt of funds of an amount not less in value than the monetary value issued, and (ii) accepted as means of payment by undertakings other than the issuer.

Mobile gadgets such as phones and other unwired communication devices enable people to process this new means of transaction to access accounts and to use payment services. Payments initiated through mobile phones etc. are called mobile payments. They are a subgroup of electronic payments (Hartmann, 2006; Rachna and Singh, 2013).

##### **2.2.2. The Concept of E-Commerce and E-Payment**

So far, people have passed through transacting with each other starting from the periods of bartering up to the emergence of paper notes and the current virtual transactions of different types (Onkvisit and Shaw, 2004). Ways in which people can pay electronically are becoming more and more systematically sophisticated but with fewer efforts from the

users' side, leading to new options for transferring (or even depositing) money. Innovative payment services try to cater to new markets and needs. They may promise high convenience, flexible use, high transaction speed and/or lower fees than traditional payment instruments (Herausgeber, 2006).

When seen from its general picture, e-commerce embraces many components including the Internet communication infrastructure, various web and e-commerce application servers, client browsers, products/services, databases, security and firewalls, electronic payment, and many others. To enable a well-developed e-commerce website storefront to work as expected by the seller and the buyers, the business needs to put all these pieces together (Kou, 2003).

The first thing that is initiated in virtual sales offices is that the customer goes through the web storefront and looks for a product/service that s/he intended to purchase. The next stage after the buyer has searched the web storefront and identified products or services, the immediate next step is making the payment for the purchase of the products/services that the customer has selected. Here is where the critical role of e-payment comes, as it is essential to e-commerce transactions. Without a successful e-payment step, e-commerce's big picture that we looked into is not complete, and very often it will not work. Therefore, the concepts of e-payment and e-commerce are inseparable and highly interdependent (Kou, 2003).

### **2.2.3. Types of E-payment**

Currently, there are several electronic payment types as more variety of them join the market following the unlimited needs of human beings and the advancement of technological innovations, which makes it difficult to enlist exhaustively the entire e-payment types. Rachna and Singh (2013), Wondwossen and Tsegai (2005), Mohiuddin (2014) and Kaur and Pathak (2015) have identified the some types of e-payment systems based on their own reviews and the contexts in their countries.

These are: credit cards which are used to make the purchase now and pay later, debit cards (prepaid cards, also known as automated teller machines (ATM) cards), Smart card or plastic cards with an integrated circuit embedded inside, electronic cheque - a digital

signature for signing and endorsing with a digital bank account, mobile money which is electronic money accumulated in a person's mobile accounts from which the holder makes direct payments from mobile phones, electronic cash which is usually operates on a smartcard, which includes an embedded microprocessor chip, digital check - a paper-check-like payment scheme to transfer funds from the payer's bank account to the payee's bank account at the time the transaction takes place, Secure Electronic Transaction (SET) - a system of online payments for ensuring the security of financial transactions on the internet developed by VISA and MasterCard, and cybercash - a web-based service that automatically processes and verifies customer's credit card information then debiting the customer's account and crediting the merchant's account electronically.

#### **2.2.4. E-Payment in Africa**

The adoption, spread, and growth of e-payment in different countries throughout the world are uneven depending on the different factors such as infrastructure and quality of regulation framework among others (Wondwossen and Tsegai, 2005; Kaur and Pathak, 2015). Although the e-payment platforms are at their advanced status in the developed nations, most developing countries in Asia and Africa are still at their infancy stage to the concept. According to Stavins (2001), most countries in Africa, except South Africa, have Internet infrastructure only in their major cities; they lack a suitable legal and regulatory framework for e-commerce and e-payment, which have been impediments for the adoption of new technology in the industry.

A similar report of the same issue from the World Bank for the year 2017, as presented by Demirgüç-Kunt, et al. (2018), showed that a progress improvement has been driven by digital payments, government policies, and a new generation of financial services accessed through mobile phones and the internet. The power of financial technology to expand access to and use of accounts is demonstrated most persuasively in Sub-Saharan Africa, where 21 percent of adults now have a mobile money accounts - nearly twice the share in 2014 and easily the highest of any region in the world (Demirgüç-Kunt, et al., 2018). According to the later report, while mobile money has been centered in East Africa, the 2017 update reveals that it has spread to western Africa and beyond.

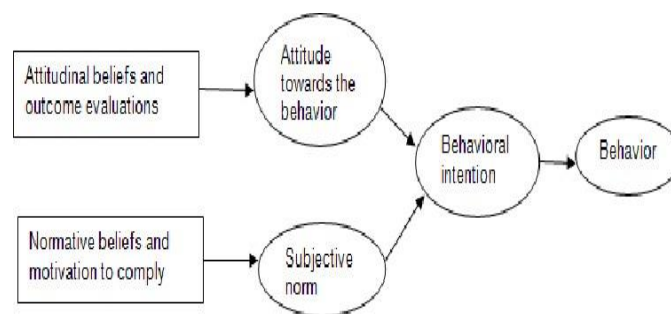
### 2.2.5. Related Theories and Models

There are a bunch of theories formulated by different scholars to test the people's intention to use and actual adoption and usage of any technological findings from information systems, information technologies, and disciplines relating to human behavior and psychology (Dwivedi, et al., 2017). Among the well-known theories and models, some of them are mentioned in the subsequent paragraphs.

### 2.2.6. Theory of Reasoned Action (TRA)

The theory of reasoned action was first developed by Fishbein and Ajzen to propose a decision to do or take actions by a person is determined by that person's individual control of his/her behavior that is driven by behavioral intentions Fishbein and Ajzen in (2010). This intention is defined by the individual's attitudes and his/her subjective norms towards that behavior (Raeisi and Lingjie, 2016; Ismail and Razak, 2011). This theory generally suggests that attitudes toward a specific behavior are influenced by a composition of two related factors - individual beliefs about the result of the behavior and individual evaluation of the possible result. Thus, if a person perceives that the result from acting a behavior is positive, then he or she will have a positive attitude towards acting the behavior and vice versa. This theory is represented by the following model.

Figure 2. 1 Model of Theory of Reasoned Action



*Adopted from Ismail and Raza (2011)*

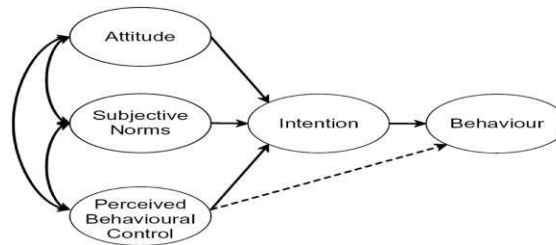
This provides an expanded picture of how, when, and why attitudes predict consumer behavior; the theory of reasoned action was primarily applied in the western countries' cultures. This implies that some of the assumptions in the model may not be compatible with other cultures from the other terminals of the world, especially those in the eastern

nations and the Africans who are comparatively culturally impacted and with a high normative influence.

### 2.2.7. The Theory of Planned Behavior (TPB)

According to Solomon et al. (2006), the model of reasoned action was extended to another more extended model called the Theory of Planned Behavior that predicts behaviors over which consumers perceive they have control by examining their perceived behavioral control. According to this model, the combination of motivational factors, attitudes toward a behavior, perceived behavioral control and subjective norms can influence the intention of a behavior. The following figure summarizes TPB factors and variables.

**Figure 2. 2 Model of Theory of Planned Behavior**



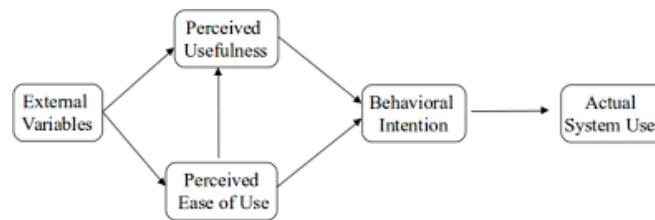
Adopted from Raeisi and Lingjie (2016)

### 2.2.8. Technology Acceptance Model (TAM)

Raeisi and Lingjie (2016) stated that the TAM was first formulated by Davis (1985) expanding it based on the original theory of reasoned action, while the latter predicted and explained human behavior in general, the TAM remained specific to information system usage. The original TAM hypothesizes two cognitive assumptions in explaining system usage: perceived ease of use and perceived usefulness were two main determinants of technology acceptance behavior (Dwivedi, et al., 2017). Venkatesh, et al., (2000) have indicated that the TAM was among the very strong and logical models to predict the intention and acceptance of new technological innovations by individuals over the last two decades prior to their studies. The arguments were also supported by the fact that the model had been the most adopted theory to explain the customers' intention and usage of different kinds of electronic banking channels such as Internet banking.

The Technology Acceptance Model (TAM) is adjusted to information systems contexts and was developed to forecast information technology acceptance and usage on the job environments. Unlike the Theory of Reasoned Action (TRA), the final conceptualization of TAM eliminates the construct of attitude in order to better explain intention carefully. TAM has been widely applied to a diverse set of technologies and users (Chao, 2019). The model is shown below.

**Figure 2. 3 Technology Acceptance Model**



Adapted from Davis (1985)

### 2.2.9. Innovation Diffusion Theory (IDT)

The diffusion of innovation theory was formulated by Rogers (1983) defining it as a process by which an innovation is disseminated through some media over time within a social system among the members of that system. The contents communicated among the members in this concept are considered as new ideas. The IDT model is mainly compatible with products or services that are potentially used in high technology applications (Raeisi and Lingjie, 2016).

There are five factors, (all perceptual and subjective in nature), that have a bearing on the adoption process: relative advantage, compatibility, trialability, observability, complexity. These factors have the potential in determining the rate of acceptance or resistance of the market to a product. Relative advantage deals with the perceived marginal value of the new product relative to the old, while compatibility is about the technology's harmoniousness or match with the acceptable behavior, norms, values, and so forth in the person's social system. Besides, complexity is all about the degree of sophistication associated with the use of the newly innovated technology product use and trialability represents the level of economic and/or social risk associated with technology use. Finally, observability is to

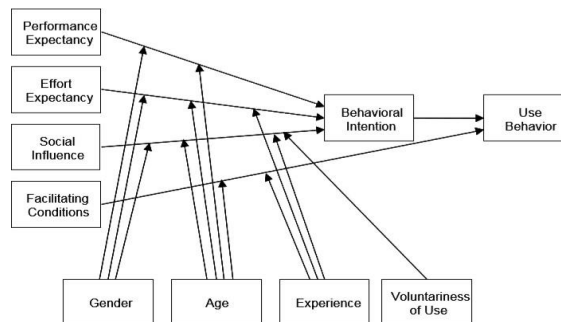
mean the simplicity with which the product benefits can be communicated (Cateora, et al., 2011; Onkvisit and Shaw, 2004; Raeisi and Lingjie, 2016).

### 2.2.10. The Unified Theory of Acceptance and Use of Technology (UTAUT)

Although different scholars worldwide have developed several models to measure people’s acceptance and use of technology in a separate manner, a more integrated model that tried to embrace the main constructs of preceding models was formulated by Venkatesh, et al. (2003). Not only integrating the concepts of prior models, but the UTAUT was also considered as a trial to unify the terminology of variables of different models and theories of technology acceptance.

The first UTAUT model was developed with four theoretical constructs representing determinants of user behavior or the intention to accept as well as the use of a given technology, which play essential roles as alternates of technology acceptance. The four major constructs are Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. Each of these constructs is explained by Venkatesh and his colleagues. Venkatesh et al. also incorporated four facilitating conditions in his model namely, gender, age, experience, and voluntariness of use (Venkatesh, et al., 2003; Dwivedi, et al., 2017). After the validation of the model, several empirical studies were conducted using the UTAUT model and these studies have approved its validity. According to Venkatesh et al. (2003), the first three constructs are direct determinants of usage, intention, and behavior, and the fourth construct is a direct determinant of use behavior. The constructs of the UTAUT model has been displayed as follows.

**Figure 2. 4 Model of Unified Theory of Acceptance and Use of Technology**

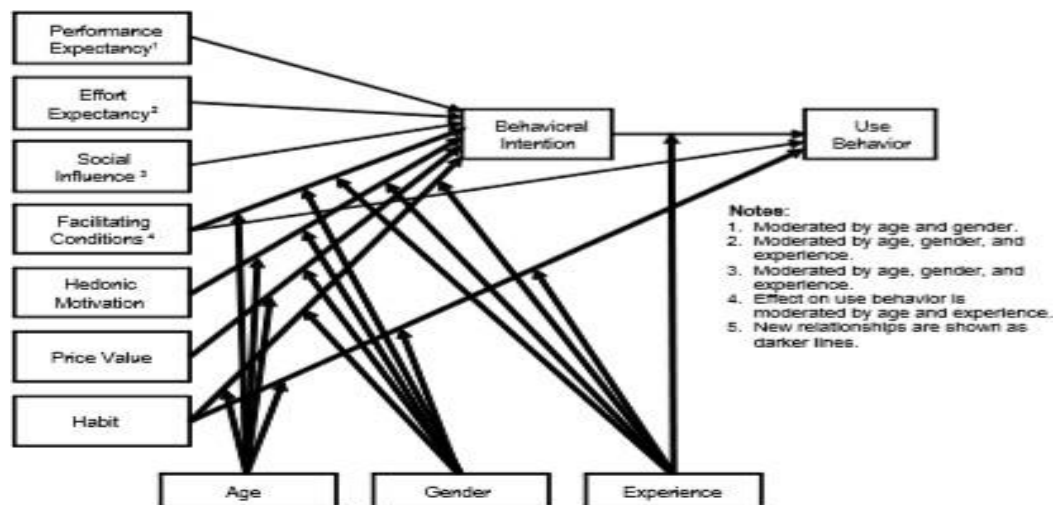


*The UTAUT model adopted from Venkatesh, et al. (2003)*

### 2.2.11. Extended Unified Theory of Acceptance and Use of Technology (UTAUT2)

About nine years after the formulations of the first UTAUT model, Venkatesh and his co-workers considered modifying the old model into a newer one adding three more constructs: Hedonic Motivation, Price Value, and Habit as indicated herebelow. Although the UTAUT model explained about 70 percent of the variance in behavioral intention to use technology and about 50 percent of the variance in technology use, the model was formulated based on organizational contexts. However, the newer model of UTAUT2 focused on the consumer than the employees of an organization (Venkatesh, et al., 2012). The diagrammatical representation of the extended UTAUT2 model has been depicted as follows.

Figure 2. 5 Model of Extended Unified Theory of Acceptance and Use of Technology



The UTAUT2 model adopted from Venkatesh et al. (2012)

### 2.3. Empirical Review and Hypothesis Development

This sub-section presents the seven hypotheses projected in the study along with the empirical explanations of how and why these hypotheses were developed.

#### A. Performance Expectancy (PE)

After reviewing about eight preceding human psychological theories, Venkatesh et al., (2003) in their first UTAUT model tried to integrate the different but somewhat similar

constructs of previous theories into a more unified model. Performance expectancy is among these modified constructs especially from the earlier factor of perceived usefulness by Davis (1985) of TAM/TAM2 and onwards. Performance expectancy is defined as the extent that an individual assumes about the attainment of an enhanced performance in his/her job when s/he applies the system into the jobs. This construct involves an individual believes that using the system will assist him or her to excel in job performance (Venkatesh, et al., 2003; Raeisi and Lingjie, 2016; Oliveira, et al., 2014).

In addition to performance expectancy, other earlier models that gave rise to the performance expectancy are: *perceive extrinsic motivation* in the motivational model (MM), *job-fit* from the Model of PC Utilization (MPCU), *relative advantage* from the theory of innovation diffusion (IDT), and *outcome expectations* from the Social Cognitive Theory (SCT). This construct was found by Venkatesh et al. and subsequent researchers to be the strongest predictor of behavioral intention and remains significant at all points of measurement in both voluntary and mandatory settings (Venkatesh, et al., 2003, p. 447; Dwivedi, et al., 2017; Ahmad, 2014).

Since the introduction of the first UTAUT model a bit less than two decades ago by Venkatesh et al., (2003), several types of research have validated performance expectancy's predicting power to the behavioral intention to use technology. Ahmad (2014) and Venkatesh, et al. (2016) themselves have re-tested the validity of performance expectancy in consumers' acceptance of different contemporary technologies such as virtual world, online discussion forum, agile IS, portfolio of IT applications, online shopping, biometrics, mobile banking, social networking, e-government technology, e-learning in the workplace, etc. According to Oliveira, et al. (2014) and Huang and Kao (2015), the performance expectancy factor was among the most significant variables to predict the behavioral intentions of users towards the adoption of mobile banking in their study conducted in Portugal concluding that: '[...] *performance expectancy is the most significant determining factor in the mobile banking services acceptance*' (Oliveira, et al., 2014, p. 695). Thus, the following hypotheses are proposed.

**H1:** *Performance expectancy (PE) has a significant influence on the behavioral intention of customers to use e-payment systems.*

### **Effort Expectancy (EE)**

Effort expectancy is derived from its antecedent ease of use construct (EOU) of the TAM. The developers of the UTAUT model have similarly defined effort expectancy to the ease of use variable as the degree of simplicity associated with the use and accepts of the system. In other words, this construct is about the amount of effort needed for a person to develop the intention and use of a given technology. In a similar way as the performance expectancy construct, effort expectancy is also related to some of the previous models such as perceived ease of use (TAM/TAM2), complexity (MPCU), and ease of use/complexity (IDT) (Venkatesh, et al., 2003; Chao, 2019; Ahmad, 2014). Constructs that are related to the effort are believed by Venkatesh, et al. to be more prominent in the early stages of experiencing a new behavior, during which process issues represent challenges to overcome, and later became overshadowed by instrumentality concerns (Venkatesh, et al., 2003; Huang and Kao, 2015; Oliveira, et al., 2014).

In their effort to identify the factors that predict the adoption of e-payment in Indian customers, Patel, et al. (2019), found that perceived ease of use is an important factor influencing the adoption of the electronic payment system in Indian e-payment environment. They argued that such a system is more likely to be adopted by potential users if the (potential) users can easily process it with no extra challenges. Hence, in line with TAM and the latest modified UTAUT/UTAUT2 models, it is assumed that PEOU has a significant effect on potential users' intention to accept e-payment systems. Different similar studies in the area of e-payments (especially mobile banking/payments and internet banking) have confirmed that the system is easy to learn and used free of effort (Patel, et al., 2019; Ahmad, 2014; He, et al., 2008). Hence, the following hypothesis has been posited.

**H2:** *Effort expectancy (EE) has a significant influence on the behavior intention of customers to use e-payment systems.*

### **Social Influence (SI)**

Social influence is defined as the extent to which an individual perceives that other people that are important to the consumer such as his/her family and friends believe s/he should

use a particular technology (Venkatesh, et al., 2012; Venkatesh, et al., 2003). This construct assumes that people's inclinations to do a certain activity or behave in a certain way are shaped by other people who have intimacy to or any other indirect relationships; they want to look like or appease these influencers in meeting their expectations (Oliveira, et al., 2014). The social influence constructs are represented by *subjective norm* from older versions such as TRA, TAM2, TPB/DTPB, and C-TAM-TPB, social factors of the MPCU, and *image* from the Innovation Diffusion Theory (IDT).

Having different labels, every construct here constitutes covert or overt assumption that person's action or behavior is usually shaped by the assumed view of that person's relatives, friends, or any important persons to the person regarding the use of a given technology (Venkatesh, et al., 2003; Chao, 2019; Huang and Kao, 2015). It was further suggested that such effects could be due to compliance in mandatory contexts that causes social influences to have a direct effect on intention. Contrarily, it performs in voluntary contexts by influencing perceptions about the technology in internalization and identification. In the former situations, social influence is important only in the early stages of individual experience with the technology, with eventually diminishing role becoming non-significant with sustained usage. There are three conditions in which the social influence has an influence on individual behavior: compliance, internalization, and identification, the latter two being related to altering an individual's belief structure and/or causing an individual to respond to potential social status gains, and the latter mechanism causes an individual to simply alter his or her intention in response to the social pressure (Venkatesh, et al., 2003; Chao, 2019; Huang and Kao, 2015).

However, Oliveira et al. (2014) have an opposite stand in this regard supporting it by evidence from their study in relation to the impact of social influence on behavioral intention of using mobile banking by customers. They have disproved their hypothesis that claimed 'social influence positively influences the behavioral intention to use m-banking' by finding that it had no significant effect on the dependent variable. This study argues saying, '[...] the rationale for this disproving finding is that mobile banking is a service that is personal and very sensitive. The need to show off, or impress others is overshadowed by the need to keep the transactions confidential and the financial data secure (p. 698).

Huang and Kao (2015) also agreed on the less significance of social influence on users' intention to accept and use the technology of phablet devices by the users in Taiwan finding the lowest significant value among other dimensions, as per the data gathered using the Delphi method.

When it comes to the e-payment technology acceptance contexts, like this study, some empirical evidences show that customers will consider adopting e-payment systems such as mobile banking services based on opinions provided by their important and surrounding people, such as friends, colleagues, family members, and relatives, as it was tested in Malaysia using the extended UTAUT2 model with the data collected using the focus group discussion of selected focus group members who use mobile banking services in different parts of Malaysia (Gharaibeh, et al., 2018). Venkatesh et al. (2012) and Solomon et al. (2006) also suggested that as the UTAUT2 was based on the socio-cultural conditions of the western nations, some of the assumptions in the model may not be compatible to other cultures from the other terminals of the world, especially those in the eastern nations and the Africans who are comparatively culturally impacted and with a high normative influence. Considering these arguments, the following hypothesis has been proposed.

**H3:** *Social Influence (SI) has a significant influence on the behavior intention of customers to use e-payment systems.*

### **Facilitating Conditions (FC)**

Facilitating conditions are defined as the degree to which consumers of a technology perceive that an organizational and technical infrastructure, personal support, and other necessary resources exist to support the use of the system are available (Venkatesh et al. 2003). A consumer who has access to a favorable set of facilitating conditions is more likely to have a higher intention to use technology, whereas the reverse applies when things that facilitate it are non-existent or lower. Depending on the contexts of different countries in the study being conducted, the facilitating conditions may vary. For a study based on the acceptance of e-payment, the facilitating conditions include the network infrastructure, a good customer database, the availability of the internet, other people's around to provide support, etc. (Venkatesh, et al., 2012; Venkatesh, et al., 2003).

Similar to the other variables for the UTAUT model, the concept of facilitating conditions also includes three of its preceding models, that is, *perceived behavioral control* (TPB/DTPB, C-TAM-TPB), *facilitating conditions* (MPCU), and *compatibility* (IDT). Venkatesh, et al. stated that the constructs are operationalized to incorporate features of the technological and/or organizational environment that are developed to clear barriers to use the technology under discussion (Venkatesh, et al., 2003; Dwivedi, et al., 2017).

According to Huang and Kao (2015), earlier studies on factors influencing acceptance of some specific technology have exhibited that facilitating conditions have a significant impact on technology adoption and usage behaviors. Some of these studies have concluded that the conditions have strong predicting powers, which could be used for forecasting technology acceptance and usage. Among the elements on facilitating conditions dimensions, compatibility is found to be the most influential criterion, which can directly influence the acceptance of technology, as per the study conducted in Taiwan on phablet user experts with the Delphi method (Huang and Kao, 2015). In addition, it was found by Oliveira et al. (2014) in their research on extending the understanding of mobile banking adoption in Portugal with a survey collected from 284 respondents revealed that facilitating conditions also have a positive effect on mobile banking adoption. With their final recommendations that providing the necessary infrastructure (both organizational and technical), in order to ensure a seamless experience can be decisive to the adoption of mobile banking (Oliveira, et al., 2014).

A study by Gharaibeh and his colleague in 2018 also confirmed that the conditions that facilitate the use of technology, especially in the e-payment systems such as mobile payments can highly push customers' intentions to use electronic payment systems. These facilitating conditions (Gharaibeh, et al., 2018) like adequate knowledge about the service and help from the bank to assist them with any difficulties while using the services increased their intention to use the platforms.

As the factor has become instrumental with the appearance of the UTAUT model much studies did rather used its preceding counterparts from the older model such as perceived behavioral control, facilitating conditions, and compatibility (Venkatesh, et al., 2003). Thus, it has been difficult to find a local study with this construct except the one

quantitatively conducted by Samuel (2019) to analyze factors that influence the effectiveness of mobile banking adoption in selected commercial banks in Addis Ababa using one of the constructs of the UTAUT model with a stratified sample size of 384 from the population of four selected bank branches. Samuel finally confirmed that facilitating conditions such as bank support has a positive influence on customers' adoption of mobile banking (Samuel, 2019). Hence the proposed hypothesis in this regard is:

**H4:** *Facilitating Conditions (FC) have a significant influence on the behavior intention of customers to use e-payment systems.*

### **Price Value (PV)**

Venkatesh et al. (2012) incorporated three distinctive constructs to their prior model of UTAUT into UTAUT2. These unique constructs are *price value*, *hedonic motivation*, and *habit*. The price value concept was dedicated to the actual consumers of technology, mainly mobile payment technologies as it was believed by the developers that consumers actually pay for the service, unlike organizational staffs, who get the service for free at the expenses of their employers (Venkatesh, et al., 2012; Jakkaew and Hemrungle, 2017). Consumers usually bear the monetary cost of such a use whereas employees do not. Thus, the value of the price will have a better weight as a result of the assumption that the use of new technology offers a better monetary cost, and such price value has a positive impact on intention. Consistent with this argument, many consumer behavior types of research included constructs related to cost to explain consumers' actions (Venkatesh, et al., 2012).

Price value is generally defined as a trade-off between the expenses paid to use the technology and the assumed gains received from using that technology (Jakkaew and Hemrungle, 2017; Venkatesh, et al., 2012). This construct has been synonymously used by different scholars with cost or price saving due to the use of the technology and it was confirmed to correctly predict the intention to use technology. A recent finding by Huang and Kao (2015) indicated that the price value concept is crucial in attracting consumers to use newer technologies in their daily activities

Palau-Saumell et al. (2019) revealed in his study conducted in Spain with regard to test the user acceptance of mobile apps for restaurants using the extended UTAUT model. He

gathered the data from 1200 Spanish users of a mobile application called MARSR for developed for restaurants and analyzed using structural equation modeling (SEM). The final finding from this study revealed that the price value, which was re-adjusted as price saving for the assumption that the price-saving orientation referring to the economic benefits that are obtained by technology users; that is to say (assuming that the use of technologies allows consumers to acquire a product or service at a lower price) has a great impact on the user's intention to use new technologies (mobile applications in this case) (Palau-Saumell, et al., 2019).

Huang and Kao (2015) also indicated that the price value is the most crucial factor for phablet adoption in their study in Taiwan to identify the factors influencing the technology acceptance of phablets devices. Another study in Zambia, which involved 152 participants to complete a survey questionnaire, that was analyzed using the regression analysis tool indicated that perceived cos (price value) is among the main predictors of the diffusion of mobile payment systems (Lesa and Tembo, 2016). This leads to the proposal of the following hypothesis.

**H5:** *Price value (PV) has a significant influence on the behavior intention of customers to use e-payment systems.*

### **Hedonic Motivation (HM)**

Hedonic motivation the other predictor among the newly included constructs in the UTAUT2 model. It is defined by developers of the model (Venkatesh, et al., 2012) as the fun or enjoyment derived from using technology and it has been shown to play an important role in determining technology acceptance and use. Chao (2019) also defines the term as “the extent to which the activity of using a specific system is perceived to be enjoyable in its own right, aside from any performance consequences resulting from system use”. This motivation is associated with the intrinsic/internal forces of an individual with respect to his/her psychological and backgrounds.

From the perspective of non-organizational parties like the consumers or users, hedonic motivation od enjoyment is confirmed to determines the acceptance and use of technology. Several studies have been conducted to test the predictive instances of hedonic motivation

in technology adoption environments. Among these studies comes from Jakkaew and Hemrungle (2017), who conducted a study in Taiwan to understand the perception of students in using Google Classroom system in IT subjects. They eventually found that the construct was effective in positively predicting the student's intention in adopting the technology and deriving fun in using it.

Another research in this perspective has also identified that hedonic motivation yielded the largest value in predicting the positive effect of the construct on Taiwanese customers to have the intention to use phablet devices as studied by Huang and Kao (2015) using the Delphi method. Another most recent study that has confirmed the significance of hedonic motivation on technology adoption was conducted in Taiwan by taking a sample of 2,000 university students to test the construct's predictive power to use mobile learning technologies and the cross-sectional study revealed the existence of an affirmative relationship of enjoyment (hedonic motivation) with behavioral intention. To the knowledge of the writer of this paper, this construct has not yet been tested locally and the writer decided to include it in this study. Therefore, the following hypothesis has been projected:

**H6:** *Hedonic Motivation (HM) has a significant influence on the behavior intention of customers to use e-payment systems.*

### **Image/Social Status (IM)**

One decisive development in the advancement of modern information communication technology is its endowments to make people connected to each other without any geographic barriers. And this social interaction of people has made it inevitable to create a social status-seeking and/or the inclination to be seen as unique in the community, a Paul Boag, co-founder of web design agency Headscape, pointed out (South University, 2016). According to Boag, modern technology use is a symbol for people to be considered as having higher social status than those who rarely or hardly use modern technological outcomes, saying that "Either way, our use of technology says something of our character and helps define us".

This assertion implies that when someone assumes himself/herself as a knowledgeable person in using obsolete technology, other people surrounding that person would reflect negatively; and some people believe that updating their adoption and use of the latest technologies enables them to portray some level of social status. (South University, 2016). The diffusion of innovation theory (Rogers, 1983) has revealed that among the five categories of people's personality traits, innovators are those who are interested to use new technology and risk-takers, youngsters and have a higher status in the society followed by early adopters, who adopt later than innovators and have the highest degree of opinion leadership within the society (Egan, 2007).

Originally, the main predictors of behavioral intention to adopt and use a given technology, as developed by Davis (1989), were perceived usefulness (PU) perceived ease of use (PEOU). However, the TAM has gone through several extensions by subsequent scholars adding more new constructs such as '*Image*', *Subjective norm*, *Job relevance*, and *Result demonstrability*, and finally has come to be remodeled as extended TAM (TAM2) by Venkatesh and Davis (2000).

The TAM2 model was designed so as to depict that image has an indirect predicting role to induce behavioral intention of using technology, being predicted itself by subjective norm. On a longitudinal field study, with an average sample size of 50 respondents in the different organizations each, research was conducted to examine TAM2, Viswanath Venkatesh and Fred D. Davis. They sampled employees from four organizations where it was mandatory to use technology in the two organizations and voluntary in the other two. Consequently, their test results indicated that image has an indirect significant effect on intention to use technology through perceived usefulness and they asserted that when there are intensive relationships and reciprocity within a certain social setting like organizations or others in discharging duties, status among the group is used as a source of power to press others via work procedures (Venkatesh and Davis, 2000; Moore and Benbasat, 1991).

Venkatesh et al., (2012) also suggested a future for testing the impact of social results like a higher status in a certain social setting or community group of looking special to that group would be a significant predictor of technology use studies. Hence, this study was intended to test the suggested variable in the context of e-payment services, as there is no

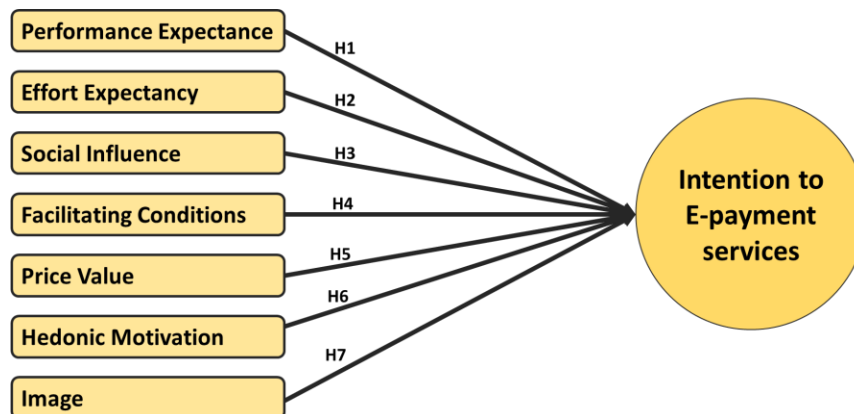
such variable tested locally so far to the knowledge of the student researcher. Therefore, the following hypothesis has been developed:

**H7: Image (I)** *has a significant influence on the behavior intention of customers to use e-payment systems.*

#### 2.4. Conceptual Framework

Based on the discussion of the finding from both the theoretical and empirical studies indicated in the preceding sections, several constructs have been identified by researchers to affect the adoption of e-payment systems either directly or indirectly. Making this evidence as a starting point, this study adopted the following conceptual framework in line with the hypotheses.

**Figure 2. 6 Conceptual framework**



Adapted from Venkatesh, et al. (2012)

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1. Introduction**

This chapter covers the research design, research approach, sampling techniques, sources of data, data collection methodology and instrument, data analysis method, and consideration of ethical issues in doing this research.

#### **3.1. Research Design**

Both the descriptive and explanatory designs were used in this study. With the support of the seven predefined hypotheses, the researcher mainly employed the explanatory type of research whereby he systematically explained the logical relationships that existed between the seven factors adapted from the UTSUT2 model which were hypothesized to have influences on the behavioral intention of users towards electronic payment systems. In addition, the descriptive design was employed to present and describe the demographic profiles such as age, gender, education, income, and job of the respondents and aggregated values of the responses in line with the five point Likert scale questions which have been presented using mean and standard deviation values.

##### **3.1.1. Research Approach**

The deductive research approach was employed in this study where the researcher started from an existing model of UTAUT2 and then deductively went down by developing seven hypotheses generated from the model to test whether the constructs stipulated in the model could support the general Unified Theory of Acceptance and Use of Technology as suggested by Saunders, et al. (2009) and Creswell (2009). The researcher then explained the relationship between the seven constructs adapted from UTAUT2 model and the dependent variable of intention to use electronic payment services.

##### **3.1.2. Research Methods**

In this study, the researcher used the quantitative method, where he tried to critically examine the link between the variables in the UTAUT2 model (performance expectancy, effort expectancy, social influence, facilitating conditions, price value, hedonic motivation

and image) and the dependent variable i.e. intention to use e-payment services, using the numerical (statistical) data generated from the statistical analysis software the systematic procedures. Then the information in the analyzed relationships was generalized into the population from which the sample was taken.

## **3.2. Sampling Design**

### **3.2.1. Target Population**

The population of this study was those individuals in Addis Ababa who are believed to be potential and actual users of electronic payment systems, as operationally defined in the preliminary part of this paper, to settle their transactional activities or transfer payments. The Central Intelligence Agency reported that the total population of Addis Ababa in the year 2019 was approximated to 4.6 million among which children below the age of 15 (0-14 years) accounted to 1.9 million (i.e. 43.21%). These underaged were not considered for this study due to their ineligibility to own financial accounts in their own names. Thus, the total target population considered in this study was the remaining 2.6 million people in the city.

The student researcher decided to focus on the mentioned population believing that the city had comparatively more advanced technologies, e-payment infrastructure, and thus more penetrations of the e-payment services than any other parts of the country (Wondwossen and Tsegai, 2005; UNCTAD, 2001).

### **3.2.2. Sampling Technique**

In many research questions and objectives, it would be impossible for the researcher either to collect and/or analyze all the data available owing to restrictions of time, money, and often access to the entire data needed. In this case, the researcher carefully and systematically decides to rationally consider a few parts of the population that s/he believes represents the entire population for the finally concluded result using either or both the two major categories of sampling - probability and non-probability. Non-probability sampling method was the one used in this study. Among the sub-categories of non-probability sampling, the convenience sampling method was employed, as the population of the study, which was the potential and actual e-payment service users in the city of Addis Ababa,

were not definitely specified or known. The technique was believed to be more convenient for this kind of research in terms of different costs, ease of data collection and manageability than other techniques (Saunders, et al., 2009; Adams, et al., 2007). Convenience sampling technique is usually chosen if the purpose of the study is exploration, the individual cases are difficult to identify, the sample to be selected is large, and there is a high variation in the population, which are the cases in this research (Saunders, et al., 2009, pp. 234-242).

### 3.2.3. Sampling Procedure and Sample Size

The total population of Addis Ababa for the year 2019 was estimated to be 4.592 million and from this amount, the number of children between the age of 0-14 years was 43.21% (1,894,203) by the Central Intelligence Agency (2019). When the number of those under the age of 14 was deducted from the total population, assuming that they were not mature enough and eligible to use the e-payment systems and that the financial institutions require at least 18 years of age to own a bank account, the remaining number of potential e-payment users were calculated to be 2,607,787, which was greater than 50,000. This led the researcher to use the following formula.

Total population = 4.592 million  
 Underages (deducted) = 1,894,203 million  
 Used for sampling = **2,607,787 million**

Tekabe and Gadise (2016) have put that when there is an infinite sample frame for a study and when the population size is greater than 50,000, the following formula developed by Cochran (1977) is used to determine the sample size.

$$n = \frac{z^2 pq}{e^2}$$

Where:

**n**= same size

**z**= confidence level desired for this study

**p**= estimated proportion of an attribute present in the population (50%)

**q**=1-p

**e**= the desired level of precision

Using the formula above, the sample size was 385 as calculated herebelow.

$$n = \frac{(1.96)(0.5)(1-0.5)}{(0.05)^2} \sim \underline{\underline{385}}$$

Therefore, the data collection instrument was administered conveniently to the sample of 385 respondents.

### **3.3. Types, Source, Instrument and Methods of Data Collection**

#### **3.3.1. Types of Data Collected**

Both primary and secondary data were collected for this study. The primary data were collected to gauge the evaluation of customers towards their intention of using electronic payment systems based on the seven factors brought to this study, whereas the secondary data were used to support the different arguments throughout the study, especially in the reviewed literature.

#### **3.3.2. Sources of Data**

The sources of the data gathered for this study were mainly the primary sources where firsthand information was obtained from respondents. The sources were those actual and potential electronic payment service users who were assumed to give relevant information for the study by indicating their appraisal of the e-payment services based on the predefined evaluation factors.

Furthermore, data were also gathered from both published and unpublished secondary sources such as books, journals, online sources including credible website articles. These sources were used to fetch information that could back the empirical and theoretical arguments presented in this study.

#### **3.3.3. Data Collection Instrument**

As this study was a survey type research with quantitative analysis, structured survey questionnaires were used to elicit the required information from the samples (Saunders, et al., 2009). The questionnaires for this study were adapted from previously tested and used sources, mainly from Venkatesh, et al. (2012), as the model used in the study was also adapted from the same source.

### **3.3.4. Method/Procedures of Data Collection**

Questionnaires containing 34 items were distributed to the respondents and some time was allowed to fill in each item before the responses were collected. The respondents were given the questionnaires including those which enquired the demographic profiles of the respondents and the rest of the items were designed to elicit respondents' evaluation of the factors affecting their intention of using e-payment services. The questionnaires consisted of items with five-point Likert scale options ranging from strongly disagree through strongly agree to let the respondents rank their levels of agreement. Data were gathered by directly contacting the respondents going in person to their workplaces and residences.

### **3.4. Data Analysis Method**

This study was analyzed quantitatively using the most frequently utilized data analysis software by the majority of social and business studies called Statistical Package for Social Sciences (SPSS) version 25. The Likert scale questionnaire results collected from the respondents were carefully inserted into the software along with a proper coding of the responses. The demographic profiles of the respondents and their survey responses were also fed into the software and the processed statistical outputs generated by the tool were analyzed, described, and presented with tables, figures, etc. using descriptive analysis.

A normality test was performed to check whether the data were normally distributed for all respondents and to make it fit for further analysis. The reliability of the instrument was also checked using the values of Cronbach's alpha coefficient. In addition, the inferential analysis was performed with the values of Pearson product-moment correlation coefficients to check the relationship of variables and regression analysis to see the effects of the seven independent variables (performance expectancy, effort expectancy, social influence, facilitating conditions, price value, hedonic motivation and image) on the user's intention to use e-payment services. The regression analysis task was performed based on the results of the summary of the model, the analysis of variance (ANOVA), and the regression coefficients yielded from the software.

### **3.5. Test of Validity and Reliability**

#### **3.5.1. Test of Validity**

The data intended for this study were collected using survey questionnaires that were already tested by the model developers (Venkatesh, et al., 2012) and other subsequent researchers, who have conducted exhaustive and consecutive studies in similar (but not identical) areas. This made the researcher believe that the data collected were valid, as they had already generated the desired information in those preceding empirical studies. Further, a pilot of questionnaires was pre-tested by distributing them to 10% of the sample size, i.e., colleagues and friends to make sure that there would not be any loss or variation in meaning that might arise during translation of the items into Amharic and few adjustments were made accordingly. The tool was also discussed upon with the advisor of the student researcher before the actual distribution took place.

As mentioned in the introductory section of this paper, the seven constructs are refinements of several factors that were used for long decades before the development of the extended UTAUT model by Venkatesh et al., (2012) in a way that they can accommodate at least eight preceding technology acceptance models including TAM, TRA, TPB, MM,TPCU, SCT, IDT, etc. This indicates that the UTAUT2 model is the most integrated model that tried to embrace the main constructs of technology acceptance studies. Not just integrating the concepts of prior models, the model was also considered as a trial to unify the terminologies of variables of different models and theories of technology acceptance.

Following the validation of the UTAUT2 model globally, plenty of consequent empirical studies were conducted using this model and these studies have already approved its fitness to predict technology acceptance behaviors of people thereby witnessing its construct validity. Therefore, the instrument used to conduct this study was adapted from this universally accepted and empirically confirmed model, which fulfills both content and construct validities.

### 3.5.2. Reliability

**Table 3. 1 Reliability test**

<b>Variable</b>	<b>Cronbach's Alpha</b>	<b>No. of Items</b>
<b>All variables</b>	<b>0.840</b>	<b>34</b>
Performance Expectancy	0.817	5
Effort Expectancy	0.892	5
Social Influence	0.828	4
Facilitating Conditions	0.826	5
Price Value	0.799	4
Hedonic Motivation	0.773	3
Image	0.802	4
Intention to Use	0.872	4

(Source: Researcher's survey, 2020)

The concern of reliability in research is the extent to which a given data collection instrument (questionnaire in this case) is dependable in producing consistent findings when it is implemented under different circumstances such as dissimilar samples of respondents or when conducted by another researcher. The level of the internal consistency items of the survey questionnaire is most of the time statistically measured with the value of Cronbach's coefficient alpha, with a minimum accepted value being 0.7 (Nunnally and Bernstein, 1994; Saunders, et al., 2009). Although the reliability of the instrument used in this study was undoubted due to its effectiveness, as tested by several previous researches, its reliability in this particular study was checked by the value generated by the SPSS tool in terms of the alpha results before the researcher proceeded to further analysis.

The entire model, as well as all the constructs, had values that were greater than the minimum recommended value of 0.7 Cronbach's coefficient alpha ranging from a minimum value of 0.773 for Hedonic Motivation through 0.892 for Effort Expectancy. The alpha value of the entire variable also well passed the minimum requirement with a value of 0.840, which was beyond the minimum requirement. Therefore, these reliability values indicated that all the items used in this study were consistent enough with each other and fit to measure the dependent variable of intention to use e-payment services.

### **3.6. Ethical Considerations**

The ethical requirements of doing research were maintained in this study. The purpose of the study and the strict confidentiality of responses were clearly stated on each questionnaire on the front page so that the respondents be well informed about how their responses would be used in the due course of the research process and that they would feel confident. The respondents were also politely asked for their willingness to participate in filling in the questionnaires. All complete responses obtained from the respondents were represented as they had responded without any manipulation or alteration of the data. Above all, the anonymity of the respondents was maintained by clearly stating on the questionnaires that the respondents were not required to give their names.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

#### 4.1. Introduction

In this chapter, the overall data gathered from the respondents using the survey questionnaires will be presented with the help of different visual aids like tables, charts with their respective interpretation thorough analyses and interpretations.

#### 4.2. Response Rate of Data

Table 4. 1 Questionnaire response rate

Data	Number	Percentage
Total distributed	385	100%
Uncollected	34	9%
Gross collection	351	91%
Invalid	18	5%
<b>Valid</b>	<b>333</b>	<b>86%</b>

(Source: Researcher's survey, 2020)

From a total of 385 questionnaires distributed to the same number of respondents, 351 were collected. From these amounts of responses collected from the respondents, 333 of them were valid for further analysis, while the remaining questionnaires 18 were discarded due to their invalidity that resulted from incomplete information for further analysis. Thus, the percentage of the response rate was 86%, which satisfied the required response rate for further analysis according to Fryrear (2015) who suggested that it is preferable to obtain a response rate of as high as 80% or beyond for survey questionnaires administered to external respondents. This is even far beyond what Saunders, et al. (2009) suggested that response rates could be as few as 50% up to 65% for business survey questionnaires.

#### 4.3. Data Screening and Cleaning

After the usable data were coded into the Statistical Software for Social Sciences (SPSS) version 25, they were thoroughly checked for any missing values (which were coded accordingly) and inappropriate insertions. The proportion of the missing values was found to be random and below 5% of the entire data and thus, the missing values were left as they

were since their impact on the result of the study was insignificant. Tabachnick and Fidell (2013) affirm that if a small proportion of data points amounting to 5% or below is randomly missing from the total data if a large data set, there is an insufficient problem that may arise due to these missing values and thus, any measures could be taken including leaving as it is to handle the missing values since the results are similar (p. 63).

#### 4.4. Demographic Profiles of Respondents

Table 4. 2 Demographic profiles of respondents

		Frequency	Percent
Age (in years)	18-25	39	11.7
	26-35	170	51.1
	36-45	95	28.5
	46-55	23	6.9
	> 55	6	1.8
	<b>Total</b>	<b>333</b>	<b>100.0</b>
Gender	Female	154	46.2
	Male	179	53.8
	<b>Total</b>	<b>333</b>	<b>100.0</b>
Job	Unemployed	6	1.8
	Gov't employed	174	52.3
	Self-employed	75	22.5
	Private Org. employee	69	20.7
	Other	9	2.7
	<b>Total</b>	<b>333</b>	<b>100.0</b>
Highest education level	Refusal	2	.6
	Multiple response	1	.3
	Primary	9	2.7
	Secondary/TVET	49	14.7
	BA/Bsc	178	53.5
	MA/MSc	90	27.0
	Above MA/MSc	4	1.2
	<b>Total</b>	<b>333</b>	<b>100.0</b>
Monthly income (in Birr)	Refusal	1	.3
	Up to 5,000	32	9.6
	5001-10,000	88	26.4
	10,001-15,000	98	29.4
	15,001-20,000	67	20.1
	Above 20,000	47	14.1
	<b>Total</b>	<b>333</b>	<b>100.0</b>

(Source: Researcher's survey, 2020)

As shown in table 4.2. above, from the total valid responses, 39 respondents which accounted for about 11.7% of the entire respondents were between the age group of 18

years and 25 years old. Respondents between the age of 26 and 35 years totaled to 179, that is 51.1% of the total respondents, while those between 36-45 years accounted to 28.5%, who were 95 in number. In addition, 23 respondents constituting 6.9% of the total respondents were between 46-55 years of age category, while the rest 6 respondents (1.8%) were above the age of 55 years. It can be inferred from the table that most of the respondents were youngsters and adults between the age of 26-45 years old, who are the most active group of the society being the potential targets to use e-payment services.

Regarding the gender of the respondents, out of the total of 333 respondents, table 4.2. above shows that about 53.8% (i.e. 179 of them) were males, while the remaining 154 (about 46.2%) were females. This implies that a little majority of the entire respondents were males, showing relatively fair distribution of data in terms of gender.

When it comes to the job of the respondents, table 4.2. above shows that majority of the respondents were those who were working in government organizations constituting 52.3% of the total respondents followed by those who were working their own business who shared 22.5% of the entire number. Furthermore, those respondents who were working in privately owned businesses accounted for 20.7% of the total respondents. Those who were not employed (who might rely on the support of their parents or any other relatives) were as few as 1.8%, while the remaining 2.7% of the respondents were engaged in others works not mentioned in the questionnaire, which may be attributed to NGOs, dependence on family, or any other. This implies that most of the people that have sources of income have participated in the survey, which in turn indicates that the findings in this study are more relevant to e-payment services providers, as these people are potential markets to be served.

Table 4.2. above also presents about the highest education level of respondents that majority (53.5%) of them held a BA/BSc degree followed by MA/MSc degree holders constitute 27% of the total respondents. Others such as those who attended a up to primary, secondary/TVET, and above MA/MSc. constituted 2.7%, 14.7%, and 1.2% respectively. Two respondents (0.6%) were unwilling to reveal their education level, and the rest 1 respondent (0.3%) gave multiple responses to the question. This implies that the responses gathered for this study are more reliable for conclusions and recommendations, as these respondents are believed to make informed and rational decisions in their responses.

The final question intended to identify the demographic profile of the respondents was about their monthly income level (in Birr). As indicated in table 4.2 hereabove, the majority of the respondents earned a monthly income level between - Br. 10,001 - Br. 15,00 which accounted for 29.4% of the respondents followed by those who earned between Br. 5,001 - 10,000 constituting 26.4% the total respondents. Those who earned between Br. 15001- 20,000 and above Br. 20,000 took 20.1% and 14.1% share of the total number respondents, respectively, while 9.6% of them earned up to Br. 5,000 and one respondent (0.3%) did not reveal the income level. Therefore, most of the respondents in this research were those with income range from Birr 1-20,000, who may afford to use e-payment services.

#### 4.5. Likert Scale Values and Analysis of Aggregated Responses

**Table 4.3 Likert scale items and aggregated responses**

<b>Performance Expectancy</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
I find e-payment services useful in my daily life.	333	4.25	.882
Using e-payment services increases my productivity.	333	4.24	.804
Using e-payment services increases my chances of achieving things.	333	4.18	.803
Using e-payment helps me to accomplish things more quickly.	333	4.33	.792
I can use e-payment at any place.	332	3.82	1.052
<b>Grand Mean and Standard Deviation</b>		<b>4.17</b>	<b>0.662</b>
<b>Effort Expectancy</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
Learning how to use e-payment systems is easy for me.	333	4.17	.850
My interaction with e-payment systems is clear.	333	4.17	.832
Becoming skillful at using e-payment services is easy for me.	333	4.20	.819
I find e-payment easy to use.	333	4.20	.827
I have the ability to use e-payment systems.	333	4.29	.766
<b>Grand Mean and Standard Deviation</b>		<b>4.21</b>	<b>0.693</b>
<b>Social Influence</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
I believe that important people (family/friends/relatives) think that I should use e-payment services.	333	3.90	.890
I believe that people who influence my behavior think I should use e-payment services.	333	3.80	.931
I believe that people whose options I value prefer that I use e-payment services.	333	4.01	.803
People who are important to me recommend me to use e-payment services.	333	4.00	.875
<b>Grand Mean and Standard Deviation</b>		<b>3.93</b>	<b>0.705</b>

<b>Facilitating Conditions</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
I have the necessary resources to use e-payment services.	333	3.84	1.032
I have the required knowledge to use e-payment services.	333	4.02	.917
E-payment services are compatible with other technologies I use.	333	3.96	.911
I can get help from others during difficulties using e-payment services.	333	3.92	.956
I feel comfortable in using e-payment services.	332	4.15	.870
<b>Grand Mean and Standard Deviation</b>		<b>3.98</b>	<b>0.720</b>
<b>Price Value</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
E-payment services are reasonably priced.	332	3.88	.973
E-payment service is a good value for the money I pay.	331	4.07	.802
At the current price, e-payment services provide a good value.	332	4.01	.874
I can save money by when I use e-payment services.	332	3.71	1.111
<b>Grand Mean and Standard Deviation</b>		<b>3.92</b>	<b>0.742</b>
<b>Hedonic Motivation</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
Using e-payment services is fun.	333	3.71	1.024
Using e-payment services is enjoyable.	333	3.86	.943
Using e-payment services makes me feel happy.	333	4.10	.828
<b>Grand Mean and Standard Deviation</b>		<b>3.89</b>	<b>0.775</b>
<b>Image</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
People in my society who use the e-payment technology have more prestige than those who do not.	332	3.76	.914
People who use e-payment technologies assume themselves as unique.	333	3.59	.973
People in my society who use e-payment technologies have a high profile	333	3.53	1.016
Having e-payment technologies attaches a status symbol in my society.	333	3.54	.998
<b>Grand Mean and Standard Deviation</b>		<b>3.61</b>	<b>0.772</b>
<b>Intention to Use E-Payment Service</b>			
<b>Items</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
I intend to continue using e-payment services in the future.	332	4.36	.643
I will always try to use e-payment services in my daily life.	333	4.24	.742
I plan to continue to use e-payment services frequently.	333	4.30	.685
I recommend others to use e-payment systems.	333	4.40	.676
<b>Grand Mean and Standard Deviation</b>		<b>4.32</b>	<b>0.587</b>

(Source: Researcher's survey, 2020)

This section deals with the description of the data obtained from the respondents using the average values of each item under the seven factors used in this study as independent constructs. The numeric values presented in table 4.3. above represent the average

agreement levels of respondents in terms of the five-point Likert scale ranges (1=Strongly disagree; 2=Disagree; 3=Neutral; 4=Agree and 5=Strongly agree). The interpretation of the mean and standard deviation values was ranked based on the scales that high rank for the mean ratings of 4.0 and above, middle-rank for the mean ratings between 4.0 and 3.5, and low rank for of 3.5 and below (Amentie, et al., 2016).

As indicated in table 4.3. above, the average scores (mean) and standard deviation values of the respondents' evaluation of Performance Expectancy was 4.17 and 0.662, respectively. In a similar manner, the aggregated mean scores and standard deviation of the respondents' reaction with respect to the Effort Expectancy construct were 4.21 and 0.693, respectively. Both average values of the two factors fell under the high rank category showing a high rank and a good factor to influence the respondents' intention to use e-payment services as per the assertion of Amentie, et al. (2016). These values imply that on average respondents agreed that using e-payment services would help them to meet different purposes in their daily lives such as easily settling payments virtually using digital options.

According to table 4.3, the overall average scores and standard deviation values for the other construct, that is Social Influence was 3.93 and 0.705, respectively falling within the range of mean ratings between 4.0 and 3.5, showing a medium and a moderate factor to affect respondents' intention to use e-payment services. Facilitating conditions was the other factor that moderately influenced customers' intentions to use e-payment services with a middle rank of 3.98 aggregated mean value and 0.720 standard deviation. Price Value had an aggregated overall mean score of 3.92 and a standard deviation of 0.742. These values implied that the respondents were in a moderate agreement among respondents regarding the value of price for using e-payment services.

Furthermore, Hedonic Motivation scored an aggregated average and standard deviation values of 3.89 and 0.775, respectively, indicating a medium rank showing moderate agreement of respondents with regard to the construct and it implied that the respondents would derive a moderate level of enjoyments while using electronic payment technologies. Similarly, respondents' evaluation of Image indicated a moderate level of agreement with

the least overall mean score of 3.61 and a standard deviation of 0.772 implying a medium rank and a moderate factor for influencing the respondents' intention to use e-payment services.

The values from the table 4.3 above indicated that on average, majority of the respondents responded the items in the five factors (Social Influence, Facilitating Conditions, Price value, Hedonic Motivation, and Image) with just above a neutral response, implying that these factors have comparatively lower impacts on majority of the respondents on their intention to use e-payment services.

Finally, the respondents' appraisal of the dependent variable Intention to use e-payment services was good, scoring an aggregated value of 4.322 and a standard deviation of 0.587, which indicates that majority of the respondents replied with an agreement to the items under the variable. These scores imply that the respondents' intention to use electronic payment systems in the future was good due to the rest of the factors that they would derive benefits from, such as the ease of using the system, the image they would expect from the social circles they live and work in, the time and other costs they would save by using the technologies, the ease of using the services and other related factors.

#### 4.6. Summary of Average Responses to Likert Scale Items

**Table 4. 4 Summary of Likert scale items and aggregated responses**

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Performance Expectancy	333	4.17	0.662
Effort Expectancy	333	4.21	0.693
Social Influence	333	3.93	0.705
Facilitating Conditions	333	3.98	0.720
Price Value	333	3.92	0.742
Hedonic Motivation	333	3.89	0.775
Image	333	3.61	0.772
Intention to Use E-payment Services	333	4.32	0.587

(Source: Researcher's survey, 2020)

As per table 4.4 above, from the seven independent constructs brought into this study, Effort Expectancy scored the highest overall mean value of 4.21 followed by Performance

Expectancy with an almost similar mean score of 4.17, which showed almost the same average response of agreement, whereas Image had the lowest mean score of 3.61. According to table 4.3 above, all the standard deviation values lied below 1, which imply that there were higher levels of similarities among the respondents regarding the evaluation of the constructs, as the standard deviation values represent the level of unanimity or similarity of responses among the respondents.

#### 4.7. Relationship Between Independent and Dependent Variables

**Table 4. 5 Matrix of Relationship Between Independent and Dependent Variables**

	PE	EE	SI	FC	PV	HM	IM	BI
PE	<b>1</b>							
EE	.451**	<b>1</b>						
SI	.440**	.379**	<b>1</b>					
FC	.538**	.518**	.489**	<b>1</b>				
PV	.440**	.415**	.418**	.504**	<b>1</b>			
HM	.417**	.406**	.399**	.464**	.455**	<b>1</b>		
IM	.136*	.147**	.313**	.201**	.392**	.363**	<b>1</b>	
BI	.500**	.408**	.427**	.500**	.465**	.424**	.295**	<b>1</b>

\*\* . Correlation is significant at the 0.01 level (2-tailed).  
 \* . Correlation is significant at the 0.05 level (2-tailed). N=333; Sig.=.000 for all factors, except IM (0.013).

(Source: Researcher’s survey, 2020)

The use of correlation analysis helped in this study to identify whether the independent variables were correlated or, if they are, what the intensity (strength) of their relationship was and in what way could their correlation be described i.e. whether they correlation is an inverse or a direct relationship. The Pearson product-moment correlation is the most used indicator of correlation by different statistical studies (Pallant, 2005). The Pearson product-moment correlation, in turn, requires variables that are in interval level (continuous) mode (Stehlik-Barry and Babinec, 2017). Therefore, as the data used for this study had been automatically converted to the average value of the individual items of each construct, and they well qualified for the data type needed to run the correlation analysis in SPSS, and the result obtained from the procedure was presented in table 4.5 above.

The acceptable Pearson correlation coefficients (r) value is between -1 and one +1 (the + and - signs indicating the direction of the relationship whereas the magnitude of the value indicates the correlation strength). Different scholars have suggested different guidelines regarding the interpretation of the values, among whom Pallant (2005) is one who suggests that a coefficient value (r) that ranges from 0.10 to 0.29 or -0.10 to -0.29 signifies a small or weak correlation; a coefficient value that ranges from 0.30 to 0.49 or -0.30 to -0.49 represents a moderate correlation, whereas a value that ranges from 0.50 to 1.0 or -0.50 to -1.0 means that the correlation between the variables is large or strong.

The correlation coefficient values presented in table 4.5. above against the subsequent guidelines presented in all variables had positive correlations with each other and with the dependent variable with r-value ranging from 0.136 to 0.5. Regarding the magnitude of the relationship between the independent and dependent variables, there was only one independent variable that had a small or weak correlation with the dependent variable Intention to use e-payment services. This variable was Image that had a coefficient value (r) of 0.295 which just lied within the interval 0.10 to 0.29. The highest correlation value was obtained by the relationship of Performance Expectancy and Facilitating Conditions with the dependent variable, which had an r-value of 0.5 each. The rest of the predictor (Effort Expectancy, Social Influences, Price Value, and Hedonic Motivation had moderate magnitudes of correlation with the independent variable with r values of 0.408, 0.427, 0.448, 0.465, and 0.424, respectively, as per the cut-off points. Therefore, all the independent variables used in this study had positive relationships with each other and with the dependent variable, implying the presence of direct and harmonious relationships between the factors used.

#### 4.8. Test of Distributions of Data (Normality)

**Table 4. 6 Test of Normality of Data**

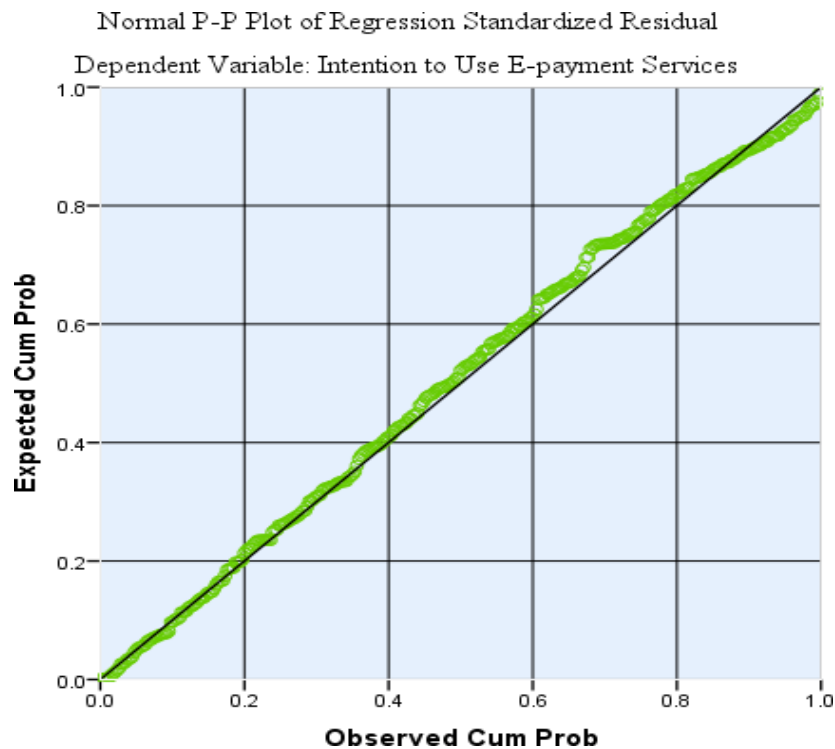
	<b>PE</b>	<b>EE</b>	<b>SI</b>	<b>FC</b>	<b>PV</b>	<b>HM</b>	<b>IM</b>	<b>BI</b>
<b>N</b>	333	333	333	333	333	333	333	333
<b>Skewness</b>	-1.075	-1.007	-.633	-.942	-.664	-.626	-.393	-.834
<b>Kurtosis</b>	1.549	1.281	.456	.992	.412	.385	.110	1.217

(Source: Researcher's survey, 2020)

The values of skewness and kurtosis are the most widely used methods in many statistical studies (Tabachnick and Fidell, 2013). Although the effect of extreme values that may result in skewed and kurtotic results of a data with a small sample size of up to 100, this effect doesn't noticeably influence a data of larger sample sizes like this study (Tabachnick and Fidell, 2013) and a value between  $\pm 2$  is considered as acceptable for a data in most cases (George and Mallery, 2020). Taking this note into consideration, the data in this study were processed using SPSS version 25 and the following numerical values were generated. The normal probability plot was also generated as put following the table.

As indicated in table 4.5. hereabove, the normality values of all the seven predictors and the dependent variable were within the acceptable ranges with the lowest skewness value of -1.007 and the highest skewness values of -0.393. Similarly, the highest Kurtosis value is 1.549 and the lowest Kurtosis value is 0.110, confirming the normality of the data was maintained for further analysis of regression. The normal distribution was also tested with the normal P-P plot as shown below.

**Figure 4. 1 Normal Probability Plot**



(Source: Researcher's survey, 2020)

Normality was also supported by the above normal P-P plot under fig. 4.1. showing that all the points lied in alignment with the diagonal straight-line rising from the bottom left to top right corners, witnessing nonexistence of major detachment from normality.

#### 4.8. Test of Extreme Relationship Among Independent Variables

**Table 4.7 Test of Extreme Relationship among Variables**

<b>Variables</b>	<b>Tolerance</b>	<b>VIF</b>
Performance Expectancy	0.609	1.643
Effort Expectancy	0.653	1.533
Social Influence	0.654	1.530
Facilitating Conditions	0.524	1.907
Price Value	0.592	1.690
Hedonic Motivation	0.638	1.569
Image	0.765	1.307

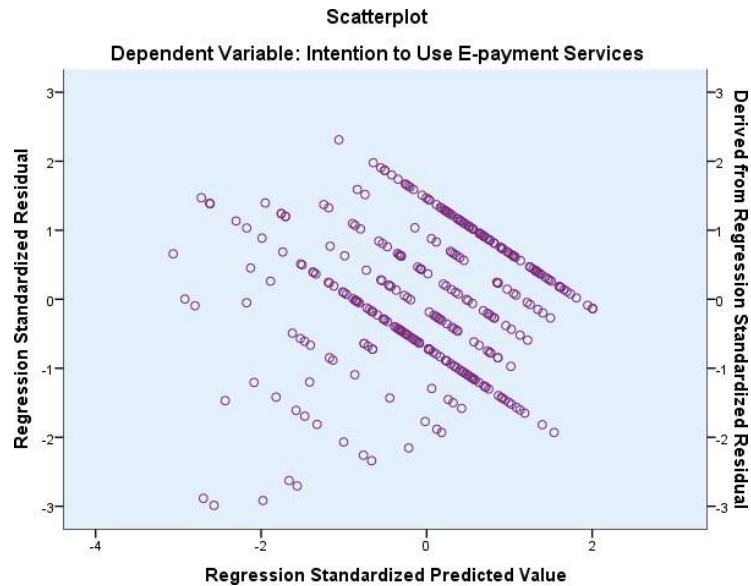
(Source: Researcher's survey, 2020)

As the presence of extreme relationship among the Independent variable might cause challenges selecting inappropriate factors or duplication of factors that would not yield a unique contribution the dependent variable, a test was performed using multicollinearity values to check for the presence of such a challenge, which is recommended bay several marketing researchers. The signal of multicollinearity and its magnitude is represented by the values of Tolerance and Variance Inflation Factor (VIF), which tell the magnitude to which every predicted variable is explained by the predictor (Hair, et al., 2002). The cut-off points suggested by Hair, et al. (2002) are tolerance values below 0.10 or a VIF valued above 10 that signifies that multicollinearity is a problem. Table 4.7 presented the multicollinearity measures of this study.

As indicated in Table 4.6 above, all variables had Tolerance values of above 0.10 or VIF values below 10, confirming that all the variables scored values within the recommended range and assured the absence of multicollinearity problem, showing a green light to proceed to multiple linear regression analysis.

## 4.9. Test of Equal Variance of Variable

Figure 4. 2 Scatter plot for testing equal variance



(Source: Researcher's survey, 2020)

A variable should reveal consistency across the scores of all the other variables (same variability at all levels), meaning the variance of errors remaining constant and stable across all levels. This feature was tested using scatter plots (among others) with the help of SPSS, as presented in figure 4.2. above which shows the rough similarity of the width of scatter points all having the same even distribution of scatter points towards the middle points.

As indicated in figure 4.2 above, the points are spread at a specific area at the middle (along the 0,0 coordinates) showing that the residuals will be roughly distributed within a rectangular shape indicating that there is no evidence of deviations from normality or homoscedasticity. Tabachnick and Fidell (2013) put that it is tolerable to see a few outliers ranging as much as 3.3 or a few more and  $-3.3$  or a few less with a large sample size of data, as figure 4.2. was also qualified for this. Therefore, this study assured that the variance in the dependent variable (customers' intention to use e-payment services) was equally distributed among all the predictors.

#### 4.10. Determinants of Customers' Intention to Use E-Payment Services

Given that the required tests as a prerequisite for running regression analysis were performed and the results showed that they well satisfied the minimum requirement as indicated in the preceding section of this paper, the next section presents the results obtained by performing the regression analysis. This section depicts the elements of linear regression analysis to see the quantitative relationships between the independent variable considered in this study (Performance Expectancy, Effort Expectancy, Facilitating Conditions, Price Value, Hedonic Motivation, and Image) and the dependent variable (Intention to Use E-payment Services).

**Table 4. 8 Predicting power of the model used**

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.628 <sup>a</sup>	.394	.381	.461

a. **Predictors:** (Constant), PE, EE, HM, SI, PV, FC, IM

b. **Dependent Variable:** Intention to Use E-payment Services

(Source: Researcher's survey, 2020)

Table 4.8 presented above portrays that from data fed into the SPSS software with the seven predictors as independent variables and intention to use e-payment services as dependent variable generated the R values of 62.8% representing the general relationship between intention to use e-payment systems and the seven predicting factors. The value of R Square for this model was 0.394 telling that 39.4% of the variance in intention to use e-payment services was explained by the model, which consisted of Performance Expectancy, Effort Expectancy, Facilitating Conditions, Price Value, Hedonic Motivation, and Image. From this model summary, one infers that there are several other factors than the seven used in this model and those other factors account for the remaining 60.6%, while the seven factors mentioned this study were capable of predicting 39.4% of users' intention to use electronic payment systems, which a good result for such studies involving behaviors of persons according to Pallant (2005).

The adjusted R Square value of 0.381 (38.1%) shows the power of the model to be generalized from the value of the sample to the population under study. The similarity or the closeness of the two values of R square and Adjusted R square in this study determined

the magnitude of the model being generalizable. Thus, the difference between these two values was as small as 1.3%, showing a little loss in the power of predicting for the population from the sample.

**Table 4. 9 Significance of Model used (Analysis of Variance - ANOVA)**

ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	45.022	7	6.432	30.206	.000 <sup>b</sup>
Residual	69.201	325	.213		
Total	114.223	332			
a. Dependent Variable: Intention to Use E-payment Services					
b. Predictors: (Constant), PE, EE, FC, SI, PV, HM, IM					

(Source: Researcher's survey, 2020)

The ANOVA table 4.9 hereabove presented the various sums of squares and their respective degrees of freedom. The critical point in this table is the value of F (30.206) which is significant as indicated under the Sig. value column (0.000). This F-ratio helped in this study to reject the null hypothesis that the regression coefficients were all zero and accept the alternative hypothesis that there was at least one variable that was not zero was accepted. Therefore, the F value was significant as evidenced by the P-value of 0.000, which was less than 0.001 and the result showed there was only less than 0.1% of a chance for the F-value to be this much if one would accept the null hypothesis.

**Table 4. 10 Effects of Independent Variables on Customers' e-payment Use Intention**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.414	.210		6.717	.000
Performance Expectancy	.202	.049	.228	4.112	.000
Effort Expectancy	.072	.046	.084	1.577	.116
Social Influence	.080	.044	.096	1.807	.072
Facilitating Conditions	.124	.049	.153	2.563	.011
Price Value	.103	.044	.131	2.326	.021
Hedonic Motivation	.066	.041	.087	1.611	.108
Image	.082	.037	.108	2.192	.029
Dependent Variable: Intention to Use E-payment Services					

(Source: Researcher's survey, 2020)

Table 4.9 above presented the regression coefficients which were used to identify how much each independent variable contributes to the dependent variable and helped to develop the model's regression equation. It depicted that the constant value was 1.414, PE=0.202, EE=0.072, SI=0.800, FC=0.124, PV=0.103, HM=0.066 and IM=0.082. The highest and lowest contribution values of Performance expectancy and Hedonic Motivation, respectively. From these values of each independent variable's coefficient, the regression model was developed as follows.

$$\text{Intention to Use E-payment Services} = 1.414 + 0.202\text{PE} + 0.072\text{EE} + 0.080\text{SI} + 0.124\text{FC} + 0.103\text{PV} + 0.066\text{HM} + 0.082\text{IM}$$

However, among the entire independent variables, Performance Expectancy, Facilitating Conditions, Price Value, and Image were found significant, as indicated under the Sig. values of each being less than 0.05 (at 95% confidence level). Thus, the model's equation is re-written as:

$$\text{Intention to Use E-payment Services} = 1.414 + 0.202\text{PE} + 0.124\text{FC} + 0.103\text{PV} + 0.082\text{IM}$$

#### 4.11. Hypothesis Testing

In this study, the student researcher had developed seven hypotheses derived from the model of UTAUT2 to check whether these seven predictors (Performance Expectancy, Effort Expectancy, Social Influence, Facilitation Conditions, Price Value, Hedonic Motivation, and Image) had significant relationships with the Intention to Use E-payment Services. The researcher compared these hypotheses against the p-values analyzed using the regression method. Therefore, the hypotheses were tested as follows.

**H1: *Performance expectancy has a significant influence on the intention of customers to use e-payment systems.***

Based on the results presented in table 4.9, Performance Expectancy generated a p-value of 0.000, which was less than 0.05 at 95% confidence level. Therefore, the hypothesis was accepted, and it was confirmed that Performance Expectancy had a positive significant effect on Intention to Use E-payment Services. That is, a one percent change in Performance Expectancy resulted in a 22.8% change in people's intention to use E-payment Services.

Performance expectancy helped to represent the test of the magnitude of people's perceptions that they would derive benefits to accomplish their jobs by using the electronic payment options available. Currently, these kinds of benefits are being offered in Ethiopia by financial institutions such as the majority of the banks and mobile money service providers including HelloCash, M-Birr, E-Birr, etc. These organizations are serving their customers by letting them transfer money to their relatives, friends, and others, paying utility bills such as water bills, telephone service bills, electricity bills, etc. Therefore, performance expectancy has been serving as the strongest predictor in different prior studies such as Venkatesh, et al. (2003); Raeisi and Lingjie (2016) and Oliveira, et al. (2014). It also yielded the highest determining effects in the financial industry like in the mobile banking sector (Oliveira, et al., 2014).

***H2: Effort expectancy has a significant influence on the intention of customers to use e-payment systems.***

Based on the results presented in table 4.9, Effort Expectancy generated a p-value of 0.116, which was greater than 0.05 at 95% confidence level. Therefore, the hypothesis was rejected. This result signifies that the construct did not have a significant contribution to explain the intention to use e-payment services. The results of many prior studies with the themes of technology acceptance revealed that performance expectancy is the extension of the previously notable factor called ease of use. This might be attributed to respondents in the sample that they have evaluated the construct in relation to their ability to easily operate the e-payment services available due to its complexity or lack of proper demonstrations of the procedures by the service providers.

The current promotions of these service on both mainstream and social media are mostly targeted on getting as many subscribers rather than teaching the customers about how these services operate and how the customers can easily understand the procedures of using the services. It is evident that many people still go to the bricks-and-mortar shops and banks to get financial transaction services even though they have already subscribed to the e-payment service, due to the lack of knowledge on how to manipulate them.

**H3: *Social Influence (SI) has a significant influence on the behavior intention of customers to use e-payment systems.***

Based on the results presented in table 4.9, Social Influence generated a p-value of 0.072, which was greater than 0.05 at 95% confidence level. Therefore, this hypothesis was rejected.

The assumption of social influence is that a person's decision of using a certain technology is more likely to be influenced by other important people who may be relatives, close friends, role models, etc. of that person, whom he/she assumes that those important persons expect him/her that s/she must use the system. However, this assumption might not work when it comes to e-payment technologies. This is because people want to keep their financial information confidential. This argument was also supported by Oliveira et al. (2014) and Huang and Kao (2015) stating that people are not that much influenced by other persons on whether they intend to use these services when it comes to financial services.

**H4: *Facilitating Conditions have a significant influence on the intention of customers to use e-payment systems.***

Based on the results presented in table 4.9, Facilitating Conditions generated a p-value of 0.011, which was less than 0.05 at 95% confidence level. Therefore, the hypothesis was accepted, and it was confirmed that Facilitating Conditions had a positive significant effect on Intention to Use E-payment Services. That is a one percent change in Facilitating Conditions resulted in a 15.3% change in people's intention to use E-payment Services.

Facilitating conditions are those situations that serve as catalysts to facilitate the cashless transactions process. Thus, this study found out that the facilitating conditions are among the major factors that influence users to consider using digital payment technologies. These conditions include, among others, the availability of required tools to use the e-payment services such as mobile devices, computers, telecommunications networks, the Internet, digital cards, the know-how to operate the systems, the availability of assistance from other people in the conditions of any difficulties in this regard.

The findings of Venkatesh, et al. (2003) and Gharaibeh et al. (2018) also coincides with that of this study that users who have access to higher and more comfortable situations to

get the facilitating conditions in the context of digital transactions such as telecom network infrastructure, good customer database, availability of the internet, etc.

***H5: Price Value (PV) has a significant influence on customers' e-payment systems use intention.***

Based on the results presented in table 4.9, Price Value generated a p-value of 0.021, which was less than 0.05 at 95% confidence level. Therefore, the hypothesis was accepted, and it was confirmed that Price Value had a positive significant effect on Intention to Use E-payment Services. That is, a one percent change in Price Value resulted in a 15.3% change in people's intention to use.

That is, the respondents convincingly admitted that they thought the prices such as the amount of different fees collected by the electronic payment service providers from the customers including the commission rates were reasonable given the values they would derive by using the systems. In this case, they might also assume the several costs that they would incur, such as the time cost and their efforts they exert when not using the digital payment options, which helped to make different transactions from anywhere anytime. In other words, the use of electronic payment technologies enables consumers, especially those who bear that actual payment of the expenses for using these systems, unlike those whom their employer organization pays for, is likely to save costs by using such technologies as also supported by (Venkatesh, et al., 2012).

***H6: Hedonic Motivation (HM) has a significant influence intention of customers to use e-payment systems.***

Based on the results presented in table 4.9, Hedonic Motivation generated a p-value of 0.108, which was greater than 0.05 at 95% confidence level. Therefore, this hypothesis was rejected.

It has been mentioned that hedonic motivation stands for the enjoyment or fun that can possibly be gained when a person uses a certain technological. But this kind of enjoyment or fun is most probably derived when people, especially youngsters and teenagers, want to use video gaming technologies, virtual classes, etc., which are entertaining in their nature. In the context of using digital payment technologies, studies say that these kinds of systems

do not have entertaining and funny behavior, as there is nothing to be enjoyable and funny while thinking of using such systems. Even such enjoyment is most likely to occur when the enjoyable and funny technologies are used for a purpose beyond one's accomplishments of basic requirements and such enjoyment are mostly experienced in countries where the rate of technology penetration is higher according to (Venkatesh, et al., 2012).

**H7: Image has a significant influence on the intention of customers to use e-payment systems.**

Based on the results presented in table 4.9, Image generated a p-value of 0.029, which was less than 0.05 at 95% confidence level. Therefore, the hypothesis was accepted, and it was confirmed that Image had a positive significant effect on Intention to Use E-payment Services. That is, a one percent change in Performance Expectancy resulted in a 10.8% change in people's intention to use e-payment Services.

This indicates that respondents had the feeling that they assumed themselves to be somewhat unique from the rest of the other people in the community for having used the digital payment technologies. This is how people perceive themselves as having a higher prestige and social status in the community thinking their adoption of the technologies as an indicator of the level of having more knowledge and to seek recognition in that community. This finding was also in line with the assumptions of the Diffusion of Innovation Theory which stated that among the five categories of people's personality traits, innovators are those who are interested to use new technology and risk-takers, youngsters and have a higher status in the society followed by early adopters, who adopt later than innovators and have the highest degree of opinion leadership within the society (Rogers, 1983).

#### **4.12. Summary of Hypothesis Testing Results**

Based on the results of the regression analysis coefficient depicted in Table 4.9, the summary of the results of the hypothesis testing has been presented below in table 4.10.

**Table 4. 11 Summary of hypothesis testing results**

<b>No.</b>	<b>Hypothesis</b>	<b>Result</b>	<b>Reason</b>
H1	Performance expectancy has a significant influence on the intention of customers to use e-payment systems.	Accepted	$P=0.000 < 0.05$ $\beta=0.228$
H2	Effort expectancy has a significant influence on the intention of customers to use e-payment systems.	Rejected	$P=0.116 > 0.05$ $\beta=0.084$
H3	Social Influence has a significant influence on the intention of customers to use e-payment systems.	Rejected	$P=0.072 > 0.05$ $\beta=0.096$
H4	Facilitating Conditions have a significant influence on the intention of customers to use e-payment systems.	Accepted	$P=0.011 < 0.05$ $\beta=0.153$
H5	Price Value has a significant influence on the intention of customers to use e-payment systems.	Accepted	$P=0.021 < 0.05$ $\beta=0.131$
H6	Hedonic Motivation (HM) has a significant influence on the intention of customers to use e-payment systems.	Rejected	$P=0.108 > 0.05$ $\beta=0.087$
H7	Image has a significant influence on the intention of customers to use e-payment systems.	Accepted	$P=0.000 < 0.05$ $\beta=0.108$

(Source: Researcher's survey, 2020)

## **CHAPTER FIVE**

### **SUMMARY OF MAJOR FINDINGS, CONCLUSION, AND RECOMMENDATIONS**

#### **5.1.Introduction**

This chapter deals with a brief summary of the main findings obtained from the analysis stage and draws conclusions based on the summary and eventually forwards recommendations to pertinent parties for their future actions. The chapter winds up by suggesting future studies that this paper was unable to reach due to some limitations.

#### **5.2.Summary of Major Findings**

This study was intended to examine the determinants that could affect users in Addis Ababa in their intentions to use e-payment services available. The study was based on a notable theory of extended Unified Theory of Acceptance and Use of Technology (UTAUT2) adapted from Venkatesh et al. (2012) by replacing Habit with an external factor (Image). The other variables were Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Price Value, and Hedonic Motivation. The major issues to be mentioned here are presented as follows:

The instrument consisting of 34 items categorized into eight sections was personally distributed to 385 respondents, from whom 86% usable questionnaires were considered for further analysis. The returned responses were tested for reliability using SPSS version 25 before proceeding to the next analyses and the test returned a Cronbach's coefficient alpha value of 0.840 for the aggregated seven factors, which was greater than the minimum requirement of 0.7.

The test of relationship among the independent variables and between the dependent and independent variables was tested using Pearson's correlation coefficient and all the values generated in this were positive. The correlation values of performance expectancy and facilitating conditions with the dependent variable were 0.5 each, while that of the rest of the variables with the dependent variable were 0.295 with image, 0.408 with effort

expectancy, 0.424 with hedonic motivation, 0.427 and 0.465 for social influence and price value, respectively.

The data were tested for normality using skewness and kurtosis to check for their fitness for regression analysis and the test result was between +2 and -2 for both parameters. Similarly, the test of acute correlation of independent variable (multicollinearity) was performed using both tolerance and VIF values, which generated VIF values of all below 10 and that of tolerance being all above 0.10. From the regression analysis performed using SPSS, the model summary revealed an R Square value of 0.394 and adjusted R Square of 0.381. Furthermore, the same analysis generated ANOVA values with an F ratio of 30.206 and a P-value of 0.000. The p values of performance expectancy, effort expectancy, social influence, facilitating conditions, price value, hedonic motivation and image were 0.000, 0.116, 0.072, 0.011, 0.021, 0.108, and 0.029, respectively. The regression results showed that performance expectancy had a Beta value of 0.228 i.e. 22.8%, all other variables remained constant. The other significant predictors' Beta values were 0.153, 0.131, and 0.108 for facilitating conditions, price value, and image, respectively.

### **5.3. Conclusion**

The data collection instrument in this study was valid and reliable, as its Cronbach's coefficient alpha value of 0.840 was above the minimum scientifically acceptable value of 0.7, and the test of relationship among variables revealed that all variables were positively correlated with each other. Performance Expectancy and Facilitating Conditions had strong relationships with the dependent variable, whereas Image had a weak correlation with the dependent variable. The rest of the variables had moderate correlations.

The data used in this study were tested for normality of distribution and the test revealed that all skewness and kurtosis values of the variables were between -2 and +2 showing that the data were normally distributed. The analysis also numerically justified the absence of extreme correlation among independent variables (multicollinearity) among the variables.

On aggregate, 39.4%, of intention to use e-payment services was explained by performance expectancy, effort expectancy, facilitating conditions, price value, hedonic motivation, and image, whereas there were 60.6% of other factors that can predict intention to use e-

payment services, that were not considered in this study. Performance expectancy made the largest significant unique contribution to explain intention to use e-payment service with a beta value of 0.228 i.e. 22.8% if the contributions of all other variables remained constant. The next strongest significant unique contribution went to facilitating conditions, price value, and image in descending order with a unique contribution beta value of 0.153, 0.131, and 0.108, respectively, which were percentage valued of 15.3%, 13.1%, and 10.8%, respective.

Based on the regression coefficients and the p-values, Performance Expectancy, Facilitating Conditions, Price Value, and Image had positive and significant influences on users' intention to use e-payment services with p-values less than 0.05. On the contrary, the remaining factors, namely, Effort Expectancy, Social Influence, and Hedonic Motivation were found to have an insignificant effect on users' intention to use e-payment services with p-values greater than 0.05 at 95% confidence level. Thus, the four hypotheses associated with the respective significant predictors were accepted, while those with insignificant influence were rejected.

Unlike several similar studies conducted abroad, this study disproved that the Effort Expectancy construct is insignificant though the descriptive analysis results revealed a higher mean value of responses. This insignificant result may be attributed to lack of knowledge by the users on how using the systems reduce their efforts, as many of the promotions on the media do not demonstrate how easy they are to operate than to push customers to just subscribe to them. This may also be due to different barriers such as languages used on the systems being only English or Amharic. The other insignificant predictor in this study was hedonic motivation, which represents the enjoyment users possibly derive from using the technology. This factor is most significant in contexts where the technology is related to games, distance learnings, etc., as evidenced by Venkatesh, et al. (2012) and Jakkaew and Hemrungrrote (2017), rather than those technologies related to financial issues.

## **5.4.Recommendations**

Rooting from the analyses performed at different stages the ideas summarized and concluded, the writer of this paper has forwarded the following recommendations to the pertinent parties to reap the invaluable benefits that might be obtained if the measures are properly taken.

### **For E-payment Services Providers (Financial Institutions)**

As this study and others from the reviewed literature reveal, performance expectancy yields the strongest unique contribution to users' intention to use e-payment services. Therefore, the financial institutions in Addis Ababa, in particular, and in Ethiopia in general, such as banks and other e-payment service providers like HelloCash, E-Birr, M-Birr, Hissab, etc., should enhance their efforts in adding more features to their e-payment services than the ones they are currently serving, like money transferring, account controlling and few bill payments. This may include integrating with as many payment requirements such as different rent fees, government service fees, etc. so that more people start using the services considering the benefits they can generate from using them. It is also advisable to introduce much easier e-payment services such as PayPal to make options plenty thereby boosting the benefits for users.

The financial service providers should make the process of adopting e-payment services hassle-free and easy to use. They also need to develop and dump knowledge base systems on their websites as Frequently Asked Questions and/or any other suitable media so the (potential) users can easily find solutions for any perceived challenges in this regard. E-payment service providers are also advised to re-consider reducing the commission fees they charge users for using their e-payment services so that potential users will not hesitate to start using the systems for fear of the assumed high rates they would be charged.

As Image is one of the significant factors to influence people's intention of using e-payment systems, the financial institutions had better associate their e-payment services with higher prestige or status by using notable endorsers or high-profile persons with luxurious services or products in their advertisements. In addition, e-payment services providing financial institutions should focus on enlightening the society on how to use e-

payment systems, by putting customized advertisements that can teach the procedures of making payments via these systems (not just pushing them to use) on the accessible mainstream and social media. The financial companies should also add multiple languages other than Amharic and English on their e-payment systems to avoid language barriers to users.

### **For Government Bodies and Policymakers**

There are several facilitating conditions for the effective operation of e-payment systems. Thus, providers of such services as electricity, telecom network infrastructure ought to be made uninterrupted and sustainably provided to enable people to use e-payment services more often. The government or the National Bank of Ethiopia should facilitate the transformation and expansion of e-payment systems and support the emergence of more companies that can provide e-payment services in the country to enable all parts of the society to use these services.

The government and its policymakers should pave the way for interested and capable organizations to start more e-payment services in Ethiopia like credit card payments, e-commerce, etc. and ease the current hassles of these services, by formulating and implementing appropriate legal platforms. The sole telecom service operator in Ethiopia, Ethio telecom, in coordination with other technology-based organizations should look for the introduction of better e-payment service as Safaricom of Kenya is doing with M-Pesa.

### **5.5.Suggestions for Future Research**

The study focused only on most of the factors that were sourced from one model of UTAUT2, but future researches with some latest and predictive constructs (perhaps in terms of safety from communicable diseases like COVID-19 that transmit via physical contacts during non-electronic transactions) may report different findings from this one.

In addition, the population considered in the study were the people in Addis Ababa, which may not be a representative of the entire people of Ethiopia, as it was a smaller geographic scope given the population of the country, due to different limitation such as time, financial resources, as well as immature past experiences of the student researcher in doing such an

extended research. Therefore, a future study that will cover a wider geographic scope to probably come up with different findings from the ones reported in this paper.

This study was conducted cross-sectionally and the sampling method used was non-probability sampling. But people's behavioral intention can change over time in line with the emergence of new technologies as well as the accumulation of more knowledge and experience and some probability sampling techniques are believed to offer more representative samples of the population. Hence, a future longitudinal study which may also be based on other sampling methods (probability sampling) may discover more factors by adding performance analysis and incorporating more sources of data such as secondary sources and other data collection tools like in-depth interviews with major stakeholders.

## REFERENCES

- Adams, J., Khan, H., Raeside, R. and White, D. (2007). *Research Methods for Graduate Business and Social Science Students*. California: Sage Publications Inc.
- Ahmad, M. (2014). *Unified Theory of Acceptance and Use of Technology (UTAUT): A Decade of Validation and Development*. Alexandria, Alexandria University.
- Ajzen, I. (2005). *Attitudes, Personality and Behavior*. 2nd ed. New York: Open University Press.
- Amentie, C., E, N. and L, K. (2016). *Barriers to Growth of Medium and Small Enterprises in Developing*. *Journal of Entrepreneurship and Organization Management*, 5(3), pp. 1-4.
- Belk, R. W. (2006). *Handbook of Qualitative Research in Marketing*. Toronto: Edward Elgar Publishing Limited.
- Bloomenthal, A. (2020). *Customer*. [Online]  
Available at: <https://www.investopedia.com/terms/c/customer.asp>  
[Accessed 21 April 2020].
- Cateora, h. R. C., Gilly, M. C. and Graham, J. L. (2011). *International Marketing*. 15 ed. New York: McGraw-Hill Companies, Inc..
- Central Intelligence Agency (2019). *The World Factbook*. [Online]  
Available at: <https://www.cia.gov/library/publications/the-world-factbook/geos/et.html>  
[Accessed 28 December 2019].
- Chao, C.-m. (2019). *Factors Determining the Behavioral Intention to Use Mobile Learning: An Application and Extension of the UTAUT Model*. *Frontiers in Psychology*, 10(16), pp. 1-14.
- Cochran, W. (1977). *Sampling Techniques*. 3rd ed. New York: John Wiley and Sons, Inc..

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 3rd ed. California: SAGE Publications. Inc.

Davis, F. D. (1985). *A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results*. Massachusetts: Massachusetts Institute of Technology.

Demirgüç-Kunt, A., Klapper, L., Ansar, S. and Hess, J. (2018). *The global Findex Database 2017: Measuring Financial Inclusion*. Washington, DC: The World Bank Group.

Demirgukunt, A., Klapper, L., Singer, D. and VanOudheusden, P. (2015). *Global Findex Database 2014: Measuring Financial Inclusion around the World*. Washington, DC: The World Bank.

Dwivedi, Y. et al. (2017). *Re-examining the Unified Theory of Acceptance and Use of Technology (UTAUT): Towards a Revised Theoretical Model*, s.l.: <https://doi.org/10.1007/s10796-017-9774-y>.

Egan, J. (2007). *Marketing Communications*, London: Thomson Learning.

Fishbein, M. and Ajzen, I., 2010. *Predicting and Changing Behavior: The Reasoned Action Approach*. New York: Taylor and Francis Group, LLC.

Fox, B. (2018). *Mobile Money Revolution Hits Ethiopia*. [Online] Available at: <https://www.euractiv.com/section/africa/news/mobile-money-revolution-hits-ethiopia/> [Accessed 25 December 2019].

Fryrear, A. (2015). *What's a Good Survey Response Rate?*. [Online] Available at: <https://www.surveygizmo.com/resources/blog/survey-response-rates/>

Gardachew, W. (2008). *Electronic-Banking in Ethiopia- Practices, Opportunities and Challenges*. *Journal of Internet Banking and Commerce*, 24(3).

George, D. and Mallery, P. (2020). *IBM SPSS Statistics 26 Step by Step: A Simple Guide and Reference*. 16th ed. New York,: Routledge. Taylor and Francis.

Getachew, A. (2019). *Jack Ma inaugurates e-commerce platform in Ethiopia*. [Online] Available at: <https://www.bloomberg.com/news/articles/2019-11-27/two-tech-giants-named-jack-are-in-ethiopia-this-week> [Accessed 24 December 2019].

Gharaibeh, M., Arshad, M. and Gharaibh, N. (2018). *Using the UTAUT2 Model to Determine Factors Affecting Adoption of Mobile Banking Services: A Qualitative Approach*. *International Journal of Interactive Mobile Technologies*, 12(4), pp. 123-134.

Hair, J.F., Bush, R.P., Ortinau, D. J. (2002). *Marketing Research: Within a Changing Information Environment*. 2<sup>nd</sup> ed. New York. McGraw–Hill.

Hartmann, M. E. (2006). *E-Payments Evolution*. Frankfurt: European Central Bank (ECB).

He, Q., Duan, Y., Fu, Z. and Li, D. (2008). *Factors Affecting Online*. IGI Global, pp. 1-22.

Herausgeber, T. L. (2006). *Handbuch E-Money, E-Payment and M-Payment*. Germany: Physica-Verlag Heidelberg.

Huang, C.-Y. and Kao, Y.-S. (2015). *UTAUT2 Based Predictions of Factors Influencing the Technology Acceptance of Phablets by DNP*. *Mathematical Problems in Engineering* , Issue <http://dx.doi.org/10.1155/2015/603747>, pp. 1-13.

Humphrey, D. K. M. and V. B. (2001). *Realizing the Gains from Electronic Payments, Cost, Pricing and Payment Choice*. *Journal of Money, Credit .and Banking*, 2(33), pp. 216-234.

Ismail, M. and Razak, R. C. (2011). *The determinant factors influencing young consumers' acceptance of mobile marketing in Malaysia*. *African Journal of Busienss Management*, 5(32), pp. 12531-12542.

- Jakkaew, P. and Hemrungrote, S. (2017). *The Use of UTAUT2 Model for Understanding Student Perceptions Using Google Classroom: A Case Study of Introduction to Information Technology Course*, Chiang Rai: DOI: 10.1109/ICDAMT.2017.7904962.
- Kaur, K. and Pathak, A. (2015). *E-Payment System on E-Commerce in India*. Journal of Engineering Research and Applications , 5(2), pp. 79-87.
- Koponen, A. (2019). *E Commerce: Electronic Payments*. [Online] Available at: <https://www.scribd.com/document/69273312/E-Commerce> [Accessed 23 December 2019].
- Kou, W. (2003). *Payment Technologies for E-Commerce*. New York: Springer-Verlag Berlin Heidelberg.
- Lesá, E. and Tembo, S. (2016). *Study on Factors Affecting Mobile Payment Systems Diffusion in Zambia*. Journal of Marketing and Management, 6(2), pp. 36-45.
- Mang'ana, K. and Katundu, M. (2018). *Determinants for Effective Implementation of Electronic Payment System by Hospitals in Tanzania: A Case of the Kilimanjaro Christian Medical Centre*. Macrothink Institute Journal of Business and Management, 6(2), pp. 47-73.
- Mohiuddin, M. (2014). *Trend and Development of E-Banking: A Study on Bangladesh*. Journal of Business and Management (IOSR-JBM) , 16(5), pp. 16-24.
- Moore, G. C. and Benbasat, I. (1991). *Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation*. Information Systems Research, 2(3), pp. 192-222.
- Nunnally, J. and Bernstein, I. (1994). *Psychometric Theory*. 3 ed. New York: McGraw-Hill, Inc.
- Oliveira, T., Faria, M., Thomas, M. and Popovič, A. (2014). *Extending the understanding of mobile banking adoption: When UTAUT meets TTF and ITM*. International Journal of Information Management, Volume 34, pp. 689-703.

Onkvisit, S. and Shaw, J. (2004). *International Marketing: Analysis and strategy*. 4th ed. New York and London: Routledge.

Palau-Saumell, R., Forgas-Coll, S., Sánchez-García, J. and Robres, E. (2019). *User Acceptance of Mobile Apps for Restaurants: An Expanded and Extended UTAUT-2*. *Sustainability*, 11(DOI 10.3390/su11041210), pp. 1-24.

Pallant, J. (2005). *SPSS Survival Manual: A step by step guide to data analysis using SPSS for Windows*. 2 ed. Sydney: Allen and Unwin.

Patel, H. and Connolly, R. (2017). *Factors Influencing Technology Adoption: A Review*. Dublin, s.n., pp. 416-431.

Patel, K. J., Modi, P. M. and Kiri, R. D. (2019). *Predicting Factors of E-Payment Adoption in India: The Customers' Perspective*, s.l.: Multi-Disciplinary International Conference.

Rachna and Singh, P. (2013). *Issues and Challenges of Electronic Payment Systems*. *International Journal for Research in*, 2(9), pp. 25-30.

Raeisi, S. and Lingjie, M. (2016). *Factors Influencing to M-Commerce Adoption in China*. *The International Journal of Business and Management*, 4(3), pp. 372-384.

Rogers, E. M. (1983). *Diffusion of Innovation*. 3rd ed. New York: The Free Press.

Samuel, D. (2019). *Factors Influencing the Adoption of Mobile Banking Service: The Case of Selected Commercial Banks in Addis Ababa, Ethiopia*, Addis Ababa: Addis Ababa University.

Saunders, M., Lewis, P. and Thornhill, A. (2009). *Research Methods For Business Students*. 5th ed. Lombarda: Pearson Education Limited .

Solomon, M., Bamossy, G., Askegaard, S. and Hogg, M. K. (2006). *Consumer Behaviour: A European Perspective*. 3 ed. Harlow : Pearson Education Limited.

South University (2016). *Modern Technology as a Status Symbol — What Your Tech Devices Say About You*. [Online]

Available at: <https://www.southuniversity.edu/news-and-blogs/2016/08/modern-technology-as-a-status-symbol-what-your-tech-devices-say-about-you-75132>  
[Accessed 5 March 2020].

Stavins, J. (2001). *Effect of Consumer Characteristics on the Use of Payment Instruments*. New England Economic Review, Issue 3, pp. 21-31.

Stehlik-Barry, K. and Babinec, A. J. (2017). *Data Analysis with IBM SPSS Statistics*. 1st ed. Birmingham: Packt Publishing Ltd..

Sumanjeet, S. (2009). *Emergence of Payment Systems in the Age of Electronic Commerce: The State of Art*. Global Journal of International Business Research, Vol. 2(2), pp. 17-36.

Tabachnick, B. G. and Fidell, L. S. (2013). *Using Multivariate Statistics*. 6th ed. California: Pearson Education, Inc.

Tekabe, S. and Gadise, G. (2016). *Challenges and Opportunities of E-payment in Ethiopia Banking Industry: With the reference of private commercial banks*. International Journal of Scientific and Research Publications, 6(8), pp. 502-509.

The World Bank Group (2016). *Innovation in Electronic Payment Adoption: The case of Small Retailers*, Washington DC: The World Bank Group.

UNCTAD (2001). *E-Commerce and Development E-Commerce and Development*, New York.

Venkatesh, V. and Davis, F. D. (2000). *A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies*. Journal of Management Science, 46(2), p. 186–204.

Venkatesh, V., Morris, M., Davis, G. and Davis, F. (2003). *User Acceptance of Information Technology: Toward a Unified View*. MIS Quarterly, 27(3), pp. 425-478.

Venkatesh, V., Thong, J. and Xu, X. (2012). *Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology*. MIS Quarterly, 36(1), pp. 157-178.

Venkatesh, V., Thong, J. and Xu, X. (2016). *Unified Theory of Acceptance and Use of Technology: A Synthesis and the Road Ahead*. Journal of the Association for Information System, 17(5), pp. 328-376 .

Wondwossen, T. and Tsegai, G. (2005). *E-Payment: Challenges and Opportunities in Ethiopia, Addis Ababa*: The United Nations: Economic Commission for Africa.

## ANNEX A: SURVEY QUESTIONNAIRE - ENGLISH

**Addis Ababa University**  
**School of Commerce**  
**Department of Marketing Management**

Dear respondent,

This study is intended for partial fulfillment for an MA degree in Marketing Management at Addis Ababa University. The research focuses on determinants of customers' intention to use e-payments services evidences from Addis Ababa. Your responses to this survey will be held confidential and all information will be used for this academic purpose only. I would like to thank you for your kind cooperation in advance. Please note that **you don't need to write your name.**

**Thank you**

Yaboneh Bonge

Tel: 0930365328

### **Part I: Demographic Factors: please put a tick mark in the box of your choice**

1. **Your age category (in years):** 18-25  26 - 35  36 - 45   
46 - 55  Above 55

2. **Gender:** Female  Male

3. **Occupation/work:** Unemployed  Private org. employee   
Government employee  Other   
Self Employed

4. **Highest education level:** Primary/elementary  MA/Msc degree   
Secondary/TVET  Above MA/Msc  
 BA/Bsc degree

5. **Monthly income (in Birr):**  
Up to 5,000  15,001 - 20,000   
5,001 - 10,000  Above 20,000   
10,001 - 15,000

**Note:** In this survey, **electronic-payment (e-payment)** services include any non-cash payment options used via mobile phones, computers, internet, etc. to pay bills, buy goods, send/receive money or other gifts. **Example,** mobile banking, ATM cards, mobile applications, etc.

**Part II – Factors affecting intention to use e-payment services**

Please indicate the level of your agreement (which is labeled as 1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree) with the following statements by putting a tick  mark under the dedicated answer.

		1	2	3	4	5
<b>Items</b>		<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>Performance Expectancy</b>						
1	I find e-payment services useful in my daily life.					
2	Using e-payment services increases my productivity.					
3	Using e-payment services increases my chances of achieving things.					
4	Using e-payment helps me to accomplish things more quickly.					
5	I can use e-payment at any place.					
<b>Effort Expectancy</b>						
6	Learning how to use e-payment systems is easy for me.					
7	My interaction with e-payment systems is clear.					
8	Becoming skillful at using e-payment services is easy for me.					
9	I find e-payment easy to use.					
10	I have the ability to use e-payment systems.					
<b>Social Influence</b>						
11	I believe that important people (family/friends/relatives) think that I should use e-payment services.					
12	I believe that people who influence my behavior think that I should use e-payment services.					
13	I believe that people whose options I value prefer that I use e-payment services.					
14	People who are important to me recommend me to use e-payment services.					
<b>Facilitating Conditions</b>						
15	I have the necessary resources to use e-payment services.					
16	I have the required knowledge to use e-payment services.					
17	E-payment services are compatible with other technologies I use.					
28	I can get help from others when I have difficulties using e-payment services.					
19	I feel comfortable in using e-payment services.					
<b>Price Value</b>						

20	E-payment services are reasonably priced.					
21	E-payment service is a good value for the money I pay.					
22	At the current price, e-payment services provide a good value.					
23	I can save money when I use e-payment services.					
<b>Hedonic Motivation</b>		<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
24	Using e-payment services is fun.					
25	Using e-payment services is enjoyable.					
26	Using e-payment services makes me feel happy.					
<b>Image</b>						
27	People in my society who use the e-payment technology have more prestige than those who do not.					
28	People who use e-payment technologies assume themselves as unique.					
29	People in my society who use the e-payment technologies have a high profile.					
30	Having e-payment technologies attaches a status symbol in my society.					
<b>Intention to Use E-Payment</b>						
31	I intend to continue using e-payment services in the future.					
32	I will always try to use e-payment services in my daily life.					
33	I plan to continue to use e-payment services frequently.					
34	I recommend others to use e-payment systems.					

**Thank you.**

**ANNEX B: SURVEY QUESTIONNAIRE - AMHARIC**

አዲስ አበባ የኒቨርሲቲ  
የንግድ ሥራ ት/ቤት  
የማርኬቲንግ ማኔጅመንት ት/ክፍል

ውድ የዚህ መጠይቅ ተሳታፊ፤

ይህ መጠይቅ በገበያ አስተዳደር የሁለተኛ ዲግሪ ማሟያነት ጥናት ለማካሄድ የተዘጋጀ ነው። የጥናቱ አላማም በአዲስ አበባ ከተማ ውስጥ የኤሌክትሮኒክ ክፍያ ማለትም በሞባይል ባንኪንግ፣ በኤ.ቲ.ኤም ካርድ፣ በኢንተርኔት፣ በአፕሊኬሽኖች፣ ወዘተ... አገልግሎትን ለመጠቀም የሚገፋፉ ጉዳዮች ምንነትና የተጽዕኖአቸው ሁኔታ ምን እንደሆነ ለመለየት የታቀደ። ለዚህ መጠይቅ የሚሰጡት ማንኛውም መረጃ በሚስጥር የሚያዝ እና ለትምህርታዊ ዓላማ ብቻ የሚውል መሆኑን ከወዲሁ አረጋግጥልዎታለሁ። ውድ ጊዜዎን አስቀድሜ አመሰግናለሁ።

ያባይ ቦንጌ  
ስ.ቁ. 0930365328

**ክፍል 1:- የመላሽ አጠቃላይ ሁኔታ**

1. የዕድሜ ክልል (በዓመት):-
 

18 - 25	<input type="checkbox"/>	26 - 35	<input type="checkbox"/>	36-45	<input type="checkbox"/>
46 - 55	<input type="checkbox"/>	ከ55 በላይ	<input type="checkbox"/>		
  
2. ፆታ:-
 

ሴት	<input type="checkbox"/>
ወንድ	<input type="checkbox"/>
  
3. የሥራ ዓይነት:-
 

የለኝም	<input type="checkbox"/>	የግል ድርጅት ሠራተኛ	<input type="checkbox"/>
የግል ሥራ	<input type="checkbox"/>	ሌላ	<input type="checkbox"/>
የመንግስት ሠራተኛ	<input type="checkbox"/>		
  
4. የትምህርት ደረጃ:-
 

1ኛ ደረጃ	<input type="checkbox"/>	2ኛ ደረጃ/ዲፕሎማ	<input type="checkbox"/>
2ኛ ዲግሪ	<input type="checkbox"/>	የመጀመሪያ ዲግሪ	<input type="checkbox"/>
ከ2ኛ ዲግሪ በላይ	<input type="checkbox"/>		
  
5. የወር ገቢ (በብር):-
 

እስከ 5,000	<input type="checkbox"/>	15,001-20,000	<input type="checkbox"/>
5,001 - 10,000	<input type="checkbox"/>	ከ20,000 በላይ	<input type="checkbox"/>
10,001-15,000	<input type="checkbox"/>		

ማስታወሻ:- በዚህ መጠይቅ ውስጥ ኤሌክትሮኒክ ወይም ካሽ አልባ የክፍያ ዘዴ ማለት ማንኛውም በሞባይል ስልክ፣ በኮምፒውተር፣ በካርድ፣ በማሽን፣ በኢንተርኔት፣ በአፕሊኬሽን፣ ወዘተ... የሚደረጉ የቢል ክፍያዎችን፣ የዕቃ ግዢን፣ ስጦታ ወይም ገንዘብ መላክ/መቀበልን እና የመሳሰሉትን ያካትታል። ለምሌ:- በሞባይል ባንኪንግ፣ በኤ.ቲ.ኤም፣ በሞባይል አፕሊኬሽን፣ ወዘተ...

**ክፍል 3፡ ኤሌክትሮኒክ የክፍያ ዘዴዎችን የመጠቀም ዝንባሌ**

አባዘዎ ለሚከተሉት ጥያቄዎች የስምምነት ደረጃዎን/መጠን 1. በጣም አልሰማምም፣ 2. አልሰማምም፣ 3. ገለልተኛ ነኝ፣ 4. አስማማለሁ እና 5. በጣም አስማማለሁ ተብለው በተቀመጡ ቦታዎች ቦታዎች ትይዩ የ  ምልክት ያድርጉ።

ጥያቄዎች		1	2	3	4	5
		በጣም አልሰማምም	አልሰማምም	ገለልተኛ ነኝ	አስማማለሁ	በጣም አስማማለሁ
<b>የሥራ አፈፃፀም</b>						
1	የኤሌክትሮኒክ ክፍያ ዘዴ ለዕለተ ዕለት ሥራዬ (ቢል ለመክፈል፣ ገንዘብ/ስጦታ ለመላክ ወይም ለመቀበል፣ ወዘተ) ጠቃሚ ሆኖ አገኘዋለሁ።					
2	ኤሌክትሮኒክ የክፍያ ዘዴን መጠቀም ምርታማነቴን ይጨምርልኛል።					
3	ኤሌክትሮኒክ የክፍያ ዘዴን መጠቀም ጉዳዬን ለማሳካት ያለኝን ዕድል ያሳድግልኛል።					
4	ኤሌክትሮኒክ የክፍያ ዘዴን መጠቀም ነገሮችን ቶሎ ለመፈፀም ይረዳኛል።					
5	ኤሌክትሮኒክ የክፍያ ዘዴን የትም ቦታ ሆኔ መጠቀም እችላለሁ።					
<b>ጥረት/ጉልበት</b>						
6	በኤሌክትሮኒክ የክፍያ ዘዴዎች አጠቃቀምን ለማወቅ ለኔ ቀላል ነው።					
7	ከኤሌክትሮኒክ የክፍያ ዘዴዎች ጋር ያለኝ መስተጋብር (ግንኙነት) ግልጽ እና ለመረዳት ቀላል ነው።					
8	በኤሌክትሮኒክ የክፍያ ዘዴ አጠቃቀም ላይ ከህሎት ለማዳበር ለኔ ቀላል ነው።					
9	ኤሌክትሮኒክ የክፍያ ዘዴ አጠቃቀም ቀላል ሆኖ አግኝቼዋለሁ።					
10	ኤሌክትሮኒክ የክፍያ ዘዴን የመጠቀም ብቃት አለኝ።					
<b>ማህበራዊ ተጽዕኖ</b>						
11	ለኔ አስፈላጊ የሆኑ ሰዎች (ቤተሰብ/ጓደኛ/ዘመድ...) ኤሌክትሮኒክ የክፍያ ዘዴን መጠቀም እንዳለብኝ ያስባሉ ብዬ አምናለሁ።					
12	የእኔ ባህሪ ላይ ተፅዕኖ ያላቸው ሰዎች ኤሌክትሮኒክ የክፍያ ዘዴን መጠቀም እንዳለብኝ ያስባሉ ብዬ አምናለሁ።					
13	ምርጫቸውን የምወድላቸው ሰዎች ኤሌክትሮኒክ የክፍያ ዘዴን ስጠቀም ይመርጣሉ ብዬ አምናለሁ።					
14	ለኔ አስፈላጊ የሆኑ ሰዎች ኤሌክትሮኒክ የክፍያ ዘዴን እንደጠቀም ይመክሩኛል።					
<b>አመቻች ሁኔታዎች</b>						
15	በኤሌክትሮኒክ የክፍያ ዘዴ ለመጠቀም አስፈላጊ የሆኑ መሣሪያዎች አሉኝ።					
16	በኤሌክትሮኒክ የክፍያ ዘዴ ለመጠቀም አስፈላጊ የሆነ እውቀት አለኝ።					
17	ኤሌክትሮኒክ የክፍያ ዘዴ እኔ ከምጠቀማቸው ሌሎች ቴክኖሎጂዎች ጋር አብሮ ይሄዳል።					
18	ኤሌክትሮኒክ የክፍያ ዘዴን ለመጠቀም ቢያስቸግረኝ ከሌሎች ሰዎች ድጋፍ ማግኘት እችላለሁ።					
19	ኤሌክትሮኒክ የክፍያ ዘዴን ስጠቀም ምቹት ይሰማኛል።					
<b>የገንዘብ ዋጋ</b>						
20	የኤሌክትሮኒክ የክፍያ አገልግቶች ዋጋቸው ተመጣጣኝ ነው።					
21	ኤሌክትሮኒክ የክፍያ ዘዴ ለምክፍለው ገንዘብ ጥሩ ዕቅድ አለው።					
22	አሁን ባለው ዋጋ ኤሌክትሮኒክ የክፍያ ዘዴ ጥሩ ዕቅድን ያስገኛል።					
23	ኤሌክትሮኒክ የክፍያ አማራጮችን ስጠቀም ገንዘቤን ይቆጥብልኛል።					
<b>አስደሳችነት</b>						
24	በኤሌክትሮኒክ የክፍያ ዘዴ መጠቀም ያስደስታል።					

25	በኤሌክትሮኒክ የክፍያ ዘዴ መጠቀም ያዝናናል።						
26	በኤሌክትሮኒክ የክፍያ ዘዴ ስጠቀም ደስታ ይሰጣል።						
<b>ገፅታ</b>							
27	ባለሀብት ማህበረሰብ ውስጥ የኤሌክትሮኒክ የክፍያ ቴክኖሎጂን የሚጠቀሙ ሰዎች ከማይጠቀሙት የተሻለ ክብር አላቸው።						
28	የኤሌክትሮኒክ የክፍያ ቴክኖሎጂን የሚጠቀሙ ሰዎች እራሳቸውን ልዩ እንደሆኑ ያስባሉ።						
29	የኤሌክትሮኒክ የክፍያ ቴክኖሎጂን የሚጠቀሙ ሰዎች ባለሀብት ማህበረሰብ ውስጥ ከፍ ያለ ስም አላቸው።						
30	የኤሌክትሮኒክ የክፍያ ቴክኖሎጂን ተጠቃሚ መሆን ባለሀብት ማህበረሰብ ውስጥ የክብር ምልክትን ያሰጣል።						
<b>በኤሌክትሮኒክ የክፍያ ስርዓት የመጠቀም ፍላጎት</b>							
31	ወደፊት በኤሌክትሮኒክ የክፍያ ስርዓት መጠቀሜን የመቀጠል ሀሳብ አለኝ።						
32	በዕለተ ዕለት ኑሮዬ በኤሌክትሮኒክ የክፍያ አዴዎች ለመጠቀም ሁልጊዜ ጥረት አደርጋለሁ።						
33	ኤሌክትሮኒክ የክፍያ አገልግቶችን በተደጋጋሚ መጠቀሜን ለመቀጠል አስባለሁ።						
34	ሌሎች ሰዎች ኤሌክትሮኒክ የክፍያ ዘዴዎች እንዲጠቀሙ እመክራለሁ።						

አመሰግናለሁ!