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ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

FACTORS AFFECTING THE ADOPTION OF POINT OF SALE TERMINALS BY BUSINESS ORGANIZATION: THE CASE OF COMMERCIAL BANK OF ETHIOPIA POS MACHINE

BY:

FEKADU GEBRE ID SGS/0108/2008B

JANUARY, 2018

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A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN MARKETING MANAGEM

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APPROVED BY BOARD OF EXAMINERS

_____	_____
Dean, Graduate Studies	Signature
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Advisor	Signature
_____	_____
External Examiner	Signature
_____	_____
Internal Examiner	Signature

DECLARATION

I, **FekaduGebre**, declare that this Master research project entitled **—Factors affecting the adoption of point of sale terminals by business organization: the case of commercial bank of Ethiopia POS machine**is submitted in partial fulfillment of the requirements for the degree of Master of Arts in Marketing Management at St.Mary's university school of graduate studies. This project contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this project is my own work.

_____ _____

FEKADU GEBRE Signature

St. Mary's university, Addis Ababa **January, 2018**

ENDORSEMENT

This is to certify that **FekaduGebre**has carried out his research work on the topic entitled **Factors affecting the adoption of point of sale terminals by business organization: the case of commercial bank of Ethiopia PoS machine** is his original work and is suitable for submission for the award of Master's Degree in Marketing Management.

_____ _____

Advisor Signature

St. Mary's university, Addis Ababa **January, 2018**

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LIST OF ABBREVIATION

CBE= commercial bank of Ethiopia

POS= point of sale

TAM2=Technology Acceptance Model

UNCTAD=United Nation Conference on Trade and Development

JR=Job relevance JR

OUT =Output quality

RES= Result demonstrability

IMG =Image

PU =Perceived Usefulness

PEOU=Perceived ease of use

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Abstract

Ethiopian payment system is cash-driven because cash is the main mode of payment. Cash based transaction is risky and cumbersome and unhealthy for any economy. To changes this scenario different banks introduce different technology based transaction system. Among the initiatives is the introduction of Point of Sale (POS) to business organizations. This paper investigates the factors affecting adoption of POS by organizations in Addis Ababa (south and east district), using the Technology Acceptance Model2 as the theoretical framework. The study adopted survey design by sampling 132 organizations that have adopted POS,using questionnaire as the research instruments and the analysis made based on 117 collected questioners. The results reveal that the adoption of POS terminals by business organization mainly affected by internet connection, unable to print a receipt, the existence of cash based transaction and taking long time for reconciliation by the banks. On the other sidethe easily accessibility and usefulness of the POS machine affects the adoption of the POS terminals positively. The adoption of POS is different from business to business. From those business restaurant and hotel and super market are uses the machine better than other business organization. The study provides a guide to banks on the factors they need to put into consideration when deploying POS machine. The study has some limitations, one of which is that the population was limited to only two Addis Ababa districts, East and South, and commercial bank of Ethiopia POS machine therefore; the findings may not be generalized to the entire country.

Key words: point of sale, technology acceptance model2, adoption, business organization.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Banks today are operating in a highly competitive and rapidly changing environment. In the changing economic scenario, a professional approach to business development is essential and the survival of a banking institution depends on its ability to take up challenges coming up in the environment. Developing business through marketing of bank‘s services is one of the crucial areas which need attention of the banks to ensure profitable survival. As a result the new information technology (IT) is turning into the most important factor in the future development of banking, influencing bank marketing and business strategies (perumal and shanmugan, 2004).

The proliferation and rapid advances in technology-based systems is leading to fundamental changes in how companies interact with customers. As a result the adoption of e-banking began to occur quite extensively as a channel of distribution for financial services due to rapid advances in IT (information technology) and intensive competitive banking markets (Mahdi and Mehrdad, 2010). Most banks are continually looking for alternative ways of relating to customers, reduce costs, improve efficiencies, and differentiate products and services. One trend in this line is the increasing use of self-service technologies (perumal and shanmugan, 2004).

The importance of effective and efficient payment systems has been closely monitored and promoted by monetary authorities in all countries of the world because the development of a national economy relies on encouraging a payment system that is secure, convenient and affordable. The economy of many nations has encountered challenges as to ensure security, convenience, and affordability of the payment system. Therefore, nations have developed effective and efficient payment systems that guarantee transactions required for a sustainable economic development. Most developing countries in Africa as the society still depend largely on physical cash for monetary transactions.This makes these countries to be heavily cash-based economy (Ajayi and Ojo, 2006).

Ethiopian is one of developing country in Africa that have payment system has been said to be cash driven. Cash is the main mode of payment in Ethiopia and a large percentage of the population is unbanked. Majority of the citizens keep cash at home which make them vulnerable to security risks.

Some challenges that result from high cash usage are robberies and cash-related crime, revenue leakage arising from too much of cash handling, inefficient treasury management due to nature of cash processing, among other challenges. While cash may be convenient, it makes taxation less transparent, and it is costly to distribute, manage, handle and process. The high cost incurred by commercial banks to move cash within branches and to make deposit in the central bank is another challenge. Cost of transportation and security also a concern. Excessive cash movement also leads to emergence of corrupt practices in the country. Furthermore, excess cash in circulation bring the occurrence of money laundering by citizens who have too much cash and would not want to be questioned on how they acquired it (Funmilola and Oluwatobi, 2015).

In order to reduce the volume of cash in circulation and reduce the risk of going about with cash, banks introduced electronic payment system such as payment cards, point of sale (POS) terminal and automated teller machine (ATM) which gave rise to significant growth in the use of electronic payment systems (Salimon, 2006).

Electronic payment system (E-Payment) refers to an electronic means of making payments for goods and services procured online or in supermarkets, shopping malls and different market place. Electronic banking has been widely used in developed countries and is rapidly expanding in developing countries. However, the slow diffusion of e-commerce to African countries has been attributed to a number of issues some of which may be unique to the African Continent (Darley, 2001). E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. E-banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including

the Internet ATM , Debit card ,credit card, POS terminals etc. The computer applications are paramount concern to the banks in today's business environment and internet has become the major platform for all financial, banking and commercial transactions in the present scenario (Magembe, and Shemi, 2002).

The rapidly growing information and communication technology is knocking the front door of every bank in the world, where Ethiopian banks would never be exceptional.

Electronic banking has been widely used in developed countries and is rapidly expanding in developing countries. In Ethiopia, however, cash is still the most dominant medium of exchange, and electronic payment systems are at an evolving stage. In the face of rapid expansion of electronic payment systems throughout the developed and the developing world, Ethiopia' financial sector cannot remain an exception in expanding the use of the electronic banking system. In this context, the study will attempt to trace the present status of e-banking specially POS terminals.

In order to reduce the volume of cash in circulation and reduce the risk of using cash, several electronic payment systems such as payment cards (smart card) and paper- based instrument were introduced by financial regulatory body in the country. This has encouraged e-payment initiatives such as the establishment of switching companies that facilitate the product, introduction of payment instruments such as Automated Teller Machine (ATM), e- money products such as credit and debit cards and point of sale (POS) which gave rise to significant growth in the use of electronic payment systems (Salimon, 2006).

Point of sale (POS) are a central mechanism of transaction that takes place in a trading environment. POS sometimes called as point of purchase refer to the location of a transaction. These systems include cash register, handheld devices, optical scanner and magnetic card readers. POS machine are widely used in the retail stores (Gillumand carter, 2012).

According to (Dion, 2003), adoption of POS technology in retail store lead to higher sales, reduce expenses and increase gross margin which have ultimately produced an increase in the overall profitability of store. (Plomp and huiden, 2011) said that several threats affect the

survival of small retails companies and the use of such technology system like POS machine offer important benefits to counter these threats.

Historically restaurant and hotels have been slow to adopt this technology. Restaurant and hotels tended to shy away from this technology, because they added costs to already slim profit margins (Laehy, Anse& Dyer, 2008).

In our country there are studies on e-payment system adoption such as ATM, internet and Mobil banking by combining. So most of the study is focus on e-payment. Butin the case of this study, it focus mainly on POS adoption by business organization, therefore the study gives a broaderknowledge about the issue.

1.2 Background of the Company

The history of the Commercial Bank of Ethiopia (CBE) dates back to the establishment of the State Bank of Ethiopia in 1942. CBE was legally established as a share company in 1963. In 1974, CBE merged with the privately owned Addis Ababa Bank. Since then, it has been playing significant roles in the development of the country

CBE is the leading bank in terms of market share, branch network, volume of asset and profitability. It is the pioneer to introduce modern banking in the country. the 2017 reports shows that, the bank have 1235 branches and more than 33,365 employees .CBE is the leading African bank with assets of Birr 382.2 billion as on June 2017 with 16.6million account holders.Also it is the first bank in Ethiopia to introduce ATM service for local users and Western Union Money Transfer Services in Ethiopia.

It has strong correspondent relationship with more than 50 renowned foreign banks and a SWIFT bilateral arrangement with 700 others. CBE has a vision to become a world- class commercial bank by the year 2025.

1.3 **Statement of the Problem**

The installation and application of technology (such as automated teller machines, POS , Internet and banking services) as a means of delivering traditional banking services has become common place in recent years as a way of maintaining customer loyalty , increasing

market share and customers satisfaction. As a result ATM and POS service can provide benefits for both the service provider and the customer as well. However there are some problems that affect the customer in the time of using the machine, (Joseph and Ston, 2003).

Low literacy rate is a serious impediment for the adoption of E-Banking in Ethiopia as it hinders the accessibility of banking services. For citizens to fully enjoy the benefits of E-Banking, they should not only know how to read and write but also possess basic IT (information technology) literacy.

Even if POS transactions are hugely beneficial, the usage rate by cardholders is very low. This truth is exposed by the experience of CBE, which currently has 10,000 POS machines in the merchant as well as inside the bank branches. In the past nine months of the fiscal year 2014/15, the bank's POS machines facilitated 228,903 transactions worth 553 million Br. This means that one POS machine processed only an average of 23 transactions within nine months. This is very low compared with the potential that a given POS machine could facilitate, (Sewagegnehu, 2015).

In our country most of the people uses physical cash for transaction purpose. So our society is adopted uses cash instead of POS terminals to purchase something even if the access is fulfilled, (Sewagegnehu, 2015).

Ethiopian bankstry to changes the traditional payment system of the country by applying different e-payment system which is more secure than that of cash payment system. From those e-payments system, POS terminals are the one that can change the payment system. But the current status of this payment system is not successful. Even if the banks distribute their POS machine to different business organization most of them are not adopting the machine on their day to day activities. For instance, based on 2016 e-payment report commercial bank of Ethiopia has more than six thousand nine hundred POS machine in different business organization. But most of the POS machine is inactive, which means they are not in use and the remaining have small number of transaction.

The 2016 fiscal year CBE e-payment reports shows that in the West and North Addis district there are around 1023 and 1082POS machines are found in different business organization respectively.Fromthose machines 995 and 1030 POS machine are inactiverespectively,and in

South and East Addis district from 1490 and 1950 number of POS machine 1445 and 1875 of POS machine are inactive respectively. This shows that most of the business organizations are not adopting the POS terminals in their day to day activities. So the research are try to indict the factor that affects the adoption of POS terminals by different sector of business organizations.

1.4 Research Question

1. What is the contribution of POS terminals for business organization on their day to day performance?

2. Is the POS machines are easy to use for the business organization?
3. Is the benefit of POS terminals are easily observable for the user?
4. Is the POS machines are capable of perform a given job without interruption?
5. Is business organization can build image by using POS terminals?

1.5 Objective of the Study

1.5.1 General Objective

The general objective of the study is assessing thefactors affecting the adoption of point of sale terminals by business organization.

1.5.2**Specific objective**

The specific objectives of the study are

1. Toexamine the contribution of POS terminals for the business organization on their day to day performance

2. To assess the easy usageof POS machine for the business organization.

3. To assess the ability of POS machine to perform a given job.

4. To assess the easily observable benefit of POS machine for the users

5. To assess theability of usage of POS machine on imagebuilding about the business organizations.

1.6 Significance of the Study

The study would contribute for different stakeholders who participate in the POS terminals transactions.

Banks can be beneficial from the study output to identify the major problems that affects the adoption of POS by business organizations.The banks use the study finding when they design a strategy about POS machine. Each banks design their own different strategy like discount, free POS machine, training and the like that can encourage adoption of the machine. But those strategy are not enough, therefor additional strategy are needed to motivate the merchant to use the machine aggressively, so the study finding can use as additional input for their strategy formulation.

Merchants also would be beneficial from the study by understanding the benefit of POS machine, such as increasing the performance of casher by simplifying the cash collection process, preventing forgery notes and germs that can be causes for different disease. The organization can control the cash flow in an organized manner.

The study can grasp information for buyer how can get benefit from POS terminals. If they use POS terminals when they purchase goods and services they are not obliged to hold a lot of money on their pocket and be stolen by theft and also can buy unlimited as much as they have enough balance on their account.

The country also can be beneficial from the study because if the organization uses POS terminals the government can decrease different kind of costs like printing cost, costs incurred for moving cash from one place to other and forsorting and avoiding deteriorated notes.

Finally the study will helps different scholars who are interested in conducting a research related on POS machines as additional sources of information (reference) for their study.

1.7 Scope of the Study

CBE has categorized its branches into fifteen districts ,this includes, West A.A, North A.A , South A.A, East A.A, Mekele, Desie, Adama, Bahirdare, Hawassa, Gonder, Jimma, Nekemt, Shashemene, Wolayita, Diredawaandinfour grades (Grade-I, Grade-II, Grade-III and Grade-V) for the simplicity of administrations. The grading system is based on the number of customer and transaction the branch has.The population for sampling is limited to the geographical location of Addis Ababa specifically WestAddis Ababa and North Addis Ababa district. The reason behind selecting those two districts are, because the number of merchant POS machine found in those two districts are large compare than others district.So the main focus area of the research is merchants who are located in those districts uses commercial bank of Ethiopia POS machine in their day to day business activitiesdue to time limitation, resource constraints, and inconvenience.

POS machines are available both in banks branches and in different sector of business organization. So the research only covered POS machines which are found in different business organizations.

1.8 Limitations of the study

The major challenges the researcher face during conducting the research is unavailability of sufficient data in a given centralized place, shortage of time and reference material.

1.9 Organization of the Study

The research paper encompasses five chapters. The first chapter is the introductory chapter which contains background of the study, statement of the problem, objective of the study, significant of the study, scope of the study and limitation of the study. The second chapter presents the review of related literature related with adoption of POS terminals by business organization.The third chapter deal with the methodology used in the research activity and the fourth chapter has present data analysis and interpretation based on the collected data. Finally conclusion and recommendation were presented in the fifth chapter.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Theoretical Review

2.1.1 Information Technology and Banking

The banking sector has been the backbone of every country. It implements and brings about economic reforms. Any change in this sector through technology has a sweeping impact on any country. The developments in information collection, storage, processing and transmission technologies have influenced all aspects of the banking activity, Musiime and Biyaki(2010).

Information technology (IT), also known as information and communication(s) technology (ICT), is a term that describes the combination of computer technology which is hardware and software with telecommunications technology such as data, image and voice networks (IBID). Recent advances in communication technology, including the development of more powerful computers, are paving the way for new banking products and services, changing the way that traditional banking is done. Technology has added a new dimension to the competitive pressures that are already reshaping the financial services industry, Boon and Yu(2000).

(Daniel,1999) states that, the banking sector has been subjected to tremendous changes because of the new technology leading to the reduction of costs associated with the management of information by replacing paper based and labor intensive methods with automated processes. It has also modified the way in which a customer has access to a bank‘s services and products, mainly through the use of automated processes such as remote banking. There are several competitive advantages associated with the adoption of technology in the banking sector, including the creation of entry barriers, enhancement of productivity, and increased revenue generation from new services (Fitzsimmons, 1997).

2.1.2 E-Commerce

In the emerging global economy, e-commerce and e-business has increasingly become a necessary component of business strategy and a strong catalyst for economic development. The integration of information and communications technology (ICT) in business has revolutionized relationships within organizations and those between and among organizations and individuals. Specifically, the use of ICT in business has enhanced productivity, encouraged greater customer participation, and enabled mass customization, besides reducing costs (Andam, 2003)

Electronic commerce refers generally to all forms of transaction relating to commercial activities, involving both organization and individuals that are based up on the processing and transmission of digitized data, including text, sound, and visual images. It also refers to the effects that the electronic exchange of commercial information may have on the institutions and processes that support and govern commercial activities (Diwan et al, (2000). Electronic commerce or e-commerce refers to a wide range of online business activities for products and services (Rosen, 2000). It also pertains to any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact. E-commerce is usually associated with buying and selling over the Internet, or conducting any transaction involving the transfer of ownership or rights to use goods or services through a computer-mediated network. Though popular, this definition is not comprehensive enough to capture recent developments in this new and revolutionary business phenomenon. A more complete definition is: E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals (Andam, 2003).

2.1.3 **E-banking**

Across the globe, current trend in private banking has been the consumer movement from traditional branch banking to more stand-alone banking. In other words, a move towards using e-delivery channels such as the Internet, telephone and mobile phones. Many banks are beginning to deliver credit and deposit products electronically. As banks venture into the electronic arena, however, they are finding new opportunities with new operational and strategic risks. E-banking is now a global phenomenon. It is an invaluable and powerful tool driving development, supporting growth, promoting innovation and enhancing competitiveness (Kamel, 2005). Technological innovations have been identified to contribute to the distribution channels of banks and these electronic delivery channels are collectively referred to as electronic banking (Goi, 2005). The evolution of banking technology has been driven by changes in distribution channels as evidenced by automated teller machine (ATM), Phone-banking, Tele banking, PC-banking and most recently internet banking.

E-banking is the newest delivery channel for banking services. Banks have used electronic channels for years to communicate and transact business with both domestic and international corporate customers. With the development of the Internet and the World Wide Web (WWW) in the latter half of the 1990s, banks are increasingly using electronic channels for receiving instructions and delivering their products and services to their customers. This form of banking is generally referred to as e-banking or Internet banking, although the range of products and services provided by banks over the electronic channel vary widely in content, capability and sophistication. E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels, Salehi and Alipour, (2010).

E-banking is form of banking, where funds are transferred through an exchange of electronic signals between financial institutions, rather than the exchange of cash, checks, or other negotiable instruments. The ownership of funds and transfers of funds between financial institutions are recorded on computer systems connected by telephone lines. Customer‘s identification is by access code, such as a password or Personal Identification Number (PIN), instead of a signature on a check or other physical document. E-banking involves individual and corporate clients, and includes bank transfers, payments and settlements, documentary

collections and credits, corporate and household lending, card business and some others (UNCTAD, 2002).

E-banking includes familiar and relatively mature electronically-based products in developing markets, such as telephone banking, credit cards, ATMs, and direct deposit. It also includes electronic bill payments and products mostly in the developing stage, including stored-value cards (e.g., smart cards/smart money) and Internet based stored value products (Andam, 2003).

2.1.4 Benefits from the Bank's Point of View: According to a survey by Booz, Allen and Hamilton, an estimated cost providing the routine business of a full service branch in USA is $1.07 per transaction, as compared to 54 cents for telephone banking, 27 cents for ATM (Automatic Teller Machine) banking and 1.5 cents for Internet banking. In NordeaBank, Finland, one online transaction costs the bank an average of just 11 cents, compared to $1 for a transaction in the branch. Average payment in Internet bank or via direct debit cost 4 times less, than payment in branch. On actual cost side (or cost side from the bank point of view), average direct debit payment cost 16 times less and payment in Internet bank 7 times less, than payment in branch (Banstola, 2007).

2.1.5 Benefits from the Customers' Point of View: The main benefit from the bank customers' point of view is significant saving of time by the automation of banking services processing and introduction of an easy maintenance tools for managing customer's money. The main advantages of E-banking for corporate customers are as: Reduced costs in accessing and using the banking services, increased comfort and timesaving - transactions can be made 24 hours a day without requiring the physical interaction with the bank, quick and continuous access to information and corporations will have easier access to information as, they can check on multiple accounts at the click of a button, better cash management (IBID).

2.1.6 E-Banking System in Ethiopian Banking Industry

The appearance of E-banking in Ethiopia goes back to the late 2001, when the largest stateowned, commercial bank of Ethiopia (CBE) introduced ATM to deliver service to the local users. Inaddition to eight ATM Located in Addis Ababa, CBE has had Visa

membership since November 14,2005. But, due to lack of appropriate infrastructure it failed to reap the fruit of its membership. Despite being the pioneer in introducing ATM based payment system and acquired visa membership, CBE Lagged behind Dashen bank, which worked aggressively to maintain its lead in E-payment system. As CBE continues to move at a snail's pace in its turnkey solution for Card Based Payment system, Dashen Bank remains so far the sole player in the field of E-Banking since 2006, (Gardachew, 2010).

Dashen bank, a forerunner in introducing E-banking in Ethiopia, has installed ATMs at convenient locations for its own cardholders. Dashen's ATM is available 24 hours a day, seven days a week and 365 days a year providing service to Debit Cardholders and International Visa Cardholders coming to the country. At the end of June 2009, Dashen bank has installed more than 40 ATMs in its area branches, university compounds, shopping malls, restaurants and hotels. In the year 2011 the payment card services have witnessed significant strides, Dashen's ATM service expanded to 70 and 704 POS terminals (Annual report of the bank, 2011).

Harnessing its leadership with advanced banking technology, Dashen Bank signed an agreement with iVery, a South African E-payment technology company, for the introduction of mobile commerce in April 21, 2009. According to the agreement, iVery Payment Technologies has licensed its Gateway and MiCard E-payment processing solution to Dashen Bank. Dashen'sModbirr users can transfer 500 birr to other Modbirr users in 24 hours a day. This would make Dashen Bank the first private bank in Ethiopia to acquire E-commerce and mobile merchant transactions (Amanyehun 2011). AlthoughDashen's new technology is one step ahead in that it allows transfer of funds from one's account toothers, the first ever E-banking gateway was signed between Ethiopian Commodity Exchange (ECX)and Dashen Bank and CBE. The E-banking system being developed with both banks is designed to givea secure electronic data sharing gateway between clients, banks and ECX, by facilitating a smoothtransaction**(**Abiy2008).

By the end of 2008 Wegagen Bank has signed an agreement with Technology Associates (TA),a Kenyan based information technology (IT) firm, for the development of the solutions for the paymentsystem and installation of a network of ATMs on December 30, 2008.

Zemen Bank, the only Ethiopian bank anchored in the idea of single branch banking, bylaunching full-blown internet banking, a service which is new to Ethiopian banking industry in the year2010. The bank tested the venture through its first phase of the online service, and now it is alreadystarted the full-fledged version, which enable customers to make online money transfer freely.

Previously, the online banking service, delivered by the bank, only gave access to bank statements andexchange rate information. The new and never-been-tried service proposed by the bank is to include freeaccount money transfer, corporate payroll uploading system where employers could upload payroll tothe system and make payments to individual worker's accounts online and online utility bill settlementsystem, when utility companies are ready(Asrat2010).

The agreement signed by three private commercial banks to launch ATM and POS terminalnetwork, in February 2009 is welcoming strategy to improve electronic card payment system in

Ethiopia. Three private commercial banks - Awash International Bank S.C., Nib International Bank S.C.and United Bank S.C. have agreed in principle to establish an ATM network called FettanATMnetwork. If everything goes as planned, Fettan ATM will install over 140 ATM machines and over 340POSs across Ethiopia. There will be one ATM at every branch of the consortium banks, all domesticairports serviced by Commercial service, shopping complexes and merchants. The agreement is the firstsignificant cooperation between competing banks in Ethiopia, which others should be encouraged tofollow as there is no single bank in Ethiopia that can afford to provide Extensive geographical coverageand access (Binyam, 2009).

2.2 Definition of POS machine

The system allows consumers to pay for retail purchase with a check card, a new name for debit card. This card looks like a credit card but with a significant difference. The money for the purchase is transferred immediately from account of debit card holder to the store's account (Malak, 2007). A Point of Sale (POS) terminal is a device that provides customers of banks with access to financial transactions in public places. This machine solves the problem

of carrying cash for the customers and decreases cash management cost for financial institutions.

The term Point of Sale (POS) is used to describe the technology used by a consumer to provide their payment information in exchange for a good or service. POS technology has actually been around for many years with the first cash register dating back to 1879 (Abell, 2009).

However, it wasn't until the mid-70s that this technology was converted from a mechanical to an electrical form. In the 1980s, the technology was advanced again to leverage modern day personal computing (PC) technology. Over the next several years, support for barcode scanning and payment card reading was added. Today, the most familiar example of a POS system would be the check-out counter at a retail or grocery store. However, there are many more forms of point of sale systems used in many business types (Posmatic, 2014).

The primary stakeholders for POS systems are: consumers, merchants, acquirer, issuer, card brand companies, software vendors, and hardware vendor (Gomzin, 2014).

A consumer is those people that use payment cards for the purchase of goods and service from merchants. Merchants are businesses who accept payment cards as a form payment for goods and services. Merchants are also the implementers of the POS systems (Gomzin, 2014).

Issuers provide the cards to consumers and maintain the payment card accounts. Card Brands, also referred to as card networks (e.g. Visa), manage the overall process of authorization and settlement. Software vendors provide the payment application and other software used in the payment process. Hardware manufacturers develop the pinpads and magnetic stripe readers (MSR) (Gomzin, 2014).

In Ethiopia, this trend has a very short history. The Commercial Bank of Ethiopia (CBE), a pioneer of this service, is engaging deeply in the deployment of the technology as a means of serving its customers. In addition to CBE, private banks are also using the machines in selected big institutions, such as starred hotels, supermarkets, gas stations and restaurants.(Yonas2015, Sep 28).

A transaction made through a POS terminal enables the use of cash in deposit accounts for two purposes simultaneously. On the one hand, it enables the account holder to make any transaction without the physical presence of the cash. On the other, it enables the bank to use the cash for different purposes like credit for investors. This means specific sums of cash can add higher value in short time.(Yonas2015, Sep 28).

Transactions through POS also give card holders certainty about their payments. The burden of moving with cash will also be avoided. This provides freedom and decreases the risk of fraud.

For financial institutions, a POS transaction is very profitable because it enables them to maintain their deposit base. Since it is the movement of cash from one account holder to the other, the banks' deposit base is still constant. In addition, it minimizes the cost of cash management and serving customers in the window. Service providers, such as hotels and supermarkets, will also benefit. Having a POS machine minimizes manual processes involved in serving customers and enables service providers to focus on important activities other than cash management. The image of modernity it attaches to the service provider is also a huge plus.

Introduction of payment instruments such as point of sale (POS) terminal and automated teller machine (ATM) which gave rise to significant growth in the use of electronic payment systems (Salimon, 2006).

2.3 Conceptual Framework

2.3.1Technology Acceptance Model (TAM2)

This study adopted the theoretical extension of Technology Acceptance Model (TAM2) introduced by Venkatesh and Davis (2000). Original TAM was developed by Davis (1986) to explain why users adopt or reject an innovative information system. It offers a powerful explanation for user acceptance and usage behavior of information technology. TAM theorizes that an individual's behavioral intention to adopt a system is determined by two beliefs, perceived usefulness (PU) and perceived ease of use (PEOU).

However, along with the fact that several studies have confirmed the strength of the TAM model, several other researchers have also highlighted important limitation of the model. Typicaly, criticism for the TAM model fall in three categories 1.the methodology used for testing the TAM model, 2.The variable and relationship that exist within the TAM model, and 3.The core theoretical foundation underlying the TAM model.

1. Limitation in the methodology used for testing the TAM model

One of the main criticisms for studies on the TAM model is that self-reported use data are used to measure system use instead of real actual use data. Legris,InghamandCollerette, (2003) pointed out, self-reported use data is a subjective measure, and is thus unreliable in measuring actual use of the system. However, many studies on TAMemploy self-reported use data. Moreover, several studies on TAM make use of students as participants in controlled environment, and therefore, results obtain from these studies cannot be generalized to the real world (Lee, Kozar, and Larsen, 2003). As many researchers argue, students may have different motivation such as obtaining grade, rewards, and so on (Legrisetal. 2003, Yousafzai et al. 2007, and Lee t al. 2003). Finally, in contrast to the large number of studies carried on applying TAM to explain and predict the voluntary use of system, very few studies considered systemthat ware for mandatory use (Yousafzai et al. 2007). However, in real life setting, most organization usually require user to use the system available with little choice for alternatives (Lee et al. 2003).

2. Limitation in the variable and relationships present within the TAM model**.**

Yang and Yoo(2003) suggested that attitude may have important effect on system use, and therefor need to be reconsidered in the TAM model. They replicated the TAM model but instead of eliminating the attitude variable as Davis, Bagozzi and Warshaw(1989) suggested, two additional attitude variables, affective and cognitive, were considered. Yang and Yoo carried out a survey asking respondent to rate their usage of a spreadsheet application, and data analysis of the survey questioner indicated that although the effective attitude variable did not show statistical significance to predict system use,the result obtained for the effect by cognitive attitude was very significant.Similarly, Brown, Massey Motoya and Burkman (2000) carried out a field study to replicate TAM in banking industry. However, instead of

considering voluntary use of a system, Brown, Massey and Burkman applied TAM in a context where use of system was mandatory. They found that perceived ease of use may have a more important impact on system acceptance than perceived usefulness, in mandatory setting. Their result contrast with earlier observation for the TAM model applied in voluntary setting, in which perceived usefulness was seen to have more influence than perceived ease of use on system acceptance (Davis, 1985).

Burton Jones and Hubona (2006) also replicated TAM by administering a survey to 125employees of a US government agency. Information about the participant belief and usage behavior with respect to two applications were gathered and analyzed. Result obtained showed that perceived usefulness and perceived ease of use may not mediate all influence from external environmental factors on system usage. Instead, some external factors such as system experience, level of education, and age may have a direct influence on system usage.

3. Limitation in the theoretical foundation for the TAM model.

Baozzi (2007) highlighted the poor theoretical relationship that was formulated among the different construct formulated in TAM. He questioned the theoretical strength of the intention actual use link, and observed that behavior could not be considered as a terminal goal. Instead, he argued that behavior should be treated as a means to a more fundamental goal. Moreover, he explained that intention may not be representative enough of actual use, because the time period between intention and adoption, could be full of uncertainties and other factors, that might influence n individual decision to adopt a technology.Bagozzi also questioned the possibility of determining behavior by adding up measures for perceived usefulness and perceived ease of use. He consider that there might be differential contribution of salient beliefs and also that human memory might not work in the same way that salient beliefs were processed in TAM.

Finally, Bagozzi remarked that TAM was a deterministic mode, and therefore, an individual act was assumed to be totally determined by his or her intention to act. But as Bagozziargued, a person intension could be subjected to evaluation and reflection, which might direct the person to reformulation his or her intension, and even to take a different course of action.

Thus, he concluded that the TAM model could not be suitable for explaining and predicting system use.

TAM2 extended the constructs of TAM and included additional determinants of TAM's PU and usage intention constructs.

The goal of TAM2 is a theoretical extension of the TAM to:

1. Include additional key determinants of TAM that explain perceived usefulness and usage intensions in terms of social influence and cognitive instrumental processes and
2. Understand how the effects of these determinants change with increasing user experience over time with the target system. A better understanding of the determinants of perceived usefulness would enable us to design organizational interventions that would increase user acceptance and usage of new systems (technologies).

One of the importantextensions brought to TAM is by Venkatesh and Davis (2000) who proposed the TAM2 model. Venkatesh and Davis identified that TAM had some imitations in explaining the reason for which a person would perceive a given system useful, and so they proposed that additional variable could be added as antecedent to the perceived usefulness variable in TAM. They called this new model, the TAM2 model. Venkatesh and Davis were also interested in evaluating the performance of TAM2 in a mandatory setting. Hence, they conducted a field study with 156 knowledge workers, who used four different systems, two of which were for voluntary use, and the other two were mandatory. The study also collecteduser's perceptions and self-reported use at three points in time: pre-implementation, one month post-implementation, and three month post-implementation.

TAM2 extended the original model to explain perceived usefulness and usage intentions including social influence (subjective norm, voluntariness, and image), cognitive instrumental processes (job relevance, output quality, and result demonstrability), and experience. The new model was tested in both voluntary and mandatory settings. The results strongly supported TAM2 and explained 60 percent of user adoption using this updated version of TAM (IBID).

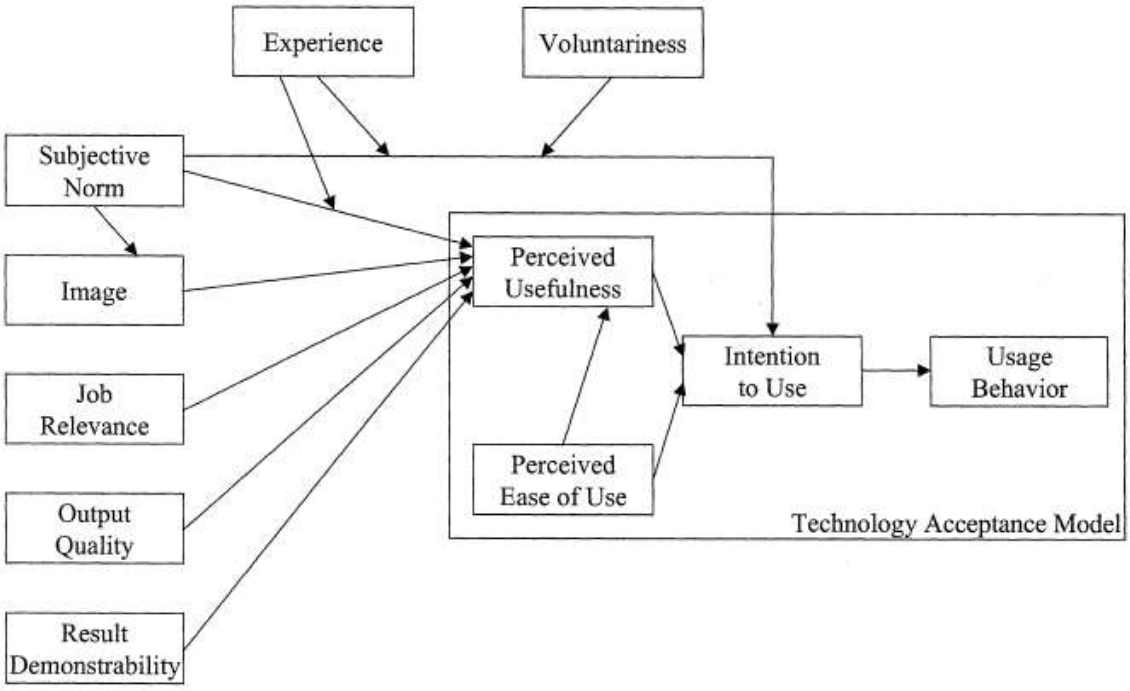

Figure 2.1: **TAM2 (Venkatesh&Bala, 2008).**

TAM2 incorporates three system characteristics: job relevance (JR), output quality (OUT), and result demonstrability (RES) (Venkatesh&Bala, 2008). System characteristics are the features of a system that can help individuals develop favorable (or unfavorable) perceptions regarding the usefulness of a system.

2.4 TAM2 variables

2.4.1 Job relevance (JR)

Job relevance is based on the system ability to support an individual job function. It is an individual's perception regarding the degree to which the target system is applicable to his or her job. In other words, job relevance is a function of the importance within one's job of the set of tasks the system is capable of supporting. Job relevance as a cognitivejudgment that exert a direct effect on perceived usefulness, (Venkatesh&Bala, 2008).

2.4.2 Output quality (OUT)

Output quality is the degree to which an individual believes that the system performs tasks necessary to his or her job (Venkatesh&Bala, 2008).

TAM2 posits that, over and above considerations of what tasks a system is capable of performing and the degree to which those tasks match their job goals (job relevance), people will take into consideration how well the system performs those tasks, which we refer to as perceptions of outputquality.

2.4.3 Result demonstrability (RES)

Result demonstrability implies that individuals will have a more positive attitude about the system usefulness if the differences between usage and positive result can be easily observed.

It is the tangibility of the result of using the innovation. This implies that individuals can be expected to form more positive perceptions of the usefulness of a system if the covariation between usage and positive results is readily discernable.

2.4.4 Image (IMG)

Image can be defined as the degree to which the use of an innovation is perceived to enhance one's image or status in one's social system (Rogers, 1983; Moore and Benbasat (1991). Polat (2011) defined image as "the vision, picture, or impression that is formed in individuals' mind, based on the data and information they gather through their interactions with the elements of an organization." Organizational image is the overall evaluation of people's views regarding an organization or system. Kazoleas, Kim & Moffitt (2001) described image of an organization as the sum of emotions, beliefs and thoughts toward the organization and this image can be interpreted as positive, negative and neutral. It is the overall impression left in the mind of customers as a result of accumulative feelings, ideas, attitudes and experiences with the business, stored in memory and transformed into a positive or negative meaning, retrieved to reconstruct image and recalled when the name of the business is heard or brought to ones' mind (Bravo, Montaner&Pina, 2009; Dowling, 1988; Kazoleas et al., 2001). Image is considered to be a critical factor in the overall evaluation of any organization (Kandampully& Hu, 2007). Positive image can be considered as

competitive advantage for organization which differentiates the organization from its competitors (Bravo, Montaner&Pina, 2010). In building image, the business create and spread a specific message that constitutes their strategic intent, mission, vision, goals and identity that reflects their core values that they cherish (Bravo et al., 2009; Van Riel &Balmer, 1997). The desire to gain social status may be one of the most important motivations to adopt an innovation. Many adopt technology because of the belief that these technologies may help create, alter, or preserve a positive image and social status for themselves within their social setting (Teo and Pok, 2003).

Image in the context of this study is defined as the degree to which adopting POS increases the adopter's social status and prestige in the society. Adopting a technology could create an impression in the mind of customers of a business and the impression could be positive or negative. Venkatesh and Davis (2000) established that image significantly influenced user acceptance. Teo and Pok (2003) found that image influence adoption intentions. Therefore, this study included image as one of the factors that could influence adoption of POS, which means that the perception of the organizations about their image, status and prestige among their customers could have some influence on their adoption of POS.

2.4.5 Perceived Usefulness (PU)

PU is a person's subjective perception of the usefulness of a system. It is defined as 'the degree to which a person believes that using a particular technology would enhance his or her job performance (Davis, 1989). PU can be approached from the perspective that using the technology would improve the way a user could complete a given task. This implies that people tend to adopt or use a technology to the extent they believe it will help them perform their job better. Many studies in information system have provided evidence of the significant effect of PU on adoption and use (Luarn& Lin, 2005; Moon & Kim, 2001; Su, Tsai & Hsu, 2013).

2.4.6 Perceived ease of use (PEOU)

Davis (1989) defined PEOU as the degree to which an individual believes that using a particular system would be free from physical and mental efforts. It follows that such system should be easy to use without stress. PEOU describes individual's perception of how easy the

innovation is to learn and to use (Venkatesh& Davis, 2000). In the case of POS, this may include ease of navigation, booting of system, and response time of the machine among others. Ease of use of a system could be a motivation for others to adopt the technology. All other things being equal, a technology that is perceived to be easier to use than another is more likely to be more acceptedby users, and using it can increase job performance. This implies that ease of use of POS could determine the adoption of the technology.

The extended TAM2 model has nine variables that can determine the adoption of POS terminals by business organization. This include: PU, PEOU, OUT, JR, RES, IMG, SN and VL.But in this paper the researcher are ignore two variables, this are voluntariness and subjective norms. The reason behind dropping this two variable are, in the case of our country business organization are not forced to use POS machines on their business transaction rather banks are gives their POS machines by convincing the expediency of the machine on theirbusiness and asking theirvoluntariness. There for testing the voluntariness of business organization is not add value because they already volunteer to accept the machine.in the case of subjective norms, the variable are more related with personal behavior rather than organizational characteristic and also most business organization decision are made by group people base on the organization procedure and goal. Because of this reason those two variable are ignored.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

Description refers to the process of defining, classifying, or categorizing phenomena of interest. Descriptive research is useful because it can provide important information regarding the average member of a group, (Geoffrey Marczyk & et al., 2005). Specifically, by gathering data on a large enough groups of people, a researcher can describe the average member, or the average performance of a member, of the particular group being studied. There for this paper is mainly focus on describing the situation about factors that affects the adoption of POS terminals by business organization, because of that the student researcher uses a research design for the study is known as descriptive research design.

3.2 Population and Sampling Techniques

3.2.1 Population of the study

The population is the totality of entities in which the researcher is interested in, i.e. the collection of individuals, objects or events about which the researcher wants to make inferences (Diamantopoulos and Schlegelmilch, 2006).

It is impossible to survey the entire population of a particular study because of limited funding and time. Therefore, it is necessary to survey a sample of the population as an alternative in order to formulate predictions about the entire population. As a result researcher takestwo districts from four Addis Ababa district. The selected districts are East and South. The reason behind selecting those two districts are because the number of merchant POS machine found in those two district is large compare than others district. Based on 2016 CBE e-payment report in East and South district there are around 1950 and 1490 number of POS machine are found respectively. On the other side in the West and North Addis district the number of POS machine are only 1023 and 1085 respectively. Those two district selected not only because of the number of merchant POS terminal they have but

the distribution also good, which means the POS machine are founds in different business sector. The merchant POS machines are managed by nearby branches and districts.

3.2.2 Sampling Technique and Sample Size Determination

Based on the 2016 fiscal year e-payment report, in the East and South district there are around 196 active POS machinefound in different business sector. From this total population the sample size would be

$$n= \frac{N}{1+N(e)2} n$$

Where

n sample size

N total population

e sampling error 95% confidence interval

e =5 %(0.05)

Total population (No of POS machine) N=196

$$n= \frac{N}{1+N(e)2} n = \frac{196}{1+196(0.05)2}$$ n=132

So the sample size of the total population is 132. By using a stratified sampling technique the total sample size are distributed to different business sectors as follows.

% hotel and restaurant= 76 ÷ 196 = 39%

% super market and shopping center = 41 ÷ 196 = 21%

% pharmacy= 11 ÷ 196 = 6 %

% general trading and retailer= 68 ÷ 196 = 34%

The samples for each business sector are:

Hotel and restaurant= 132 *39% = 51

Super market and shopping center = 132 *21% = 28

Pharmacy= 132 *6% = 8

General trading and retailer = 132 *34% = 45

Table 3.1 Sample size from each business organization

Type of business organization	**No of business**	**Sample size**
Hotels and restaurant	76	51
Mini,Super market & shopping center	41	28
pharmacy	11	8
General trading & retailers	68	45
Total population & sample size	196	132

After dividing the total sample size to different business sectors the researcher distributes the questioner to business organizations by using convenience sampling techniques.

3.3 Sourcesand Tools/Instruments of Data Collection.

3.3.1. Sources of Data

To get accurate and recent information the researcher used primary as well as secondary data as a source of data.

In the case of secondary data the researcher uses different published magazines, broacher and unpublished documents which found in the bank and have relation with the issue.

The researcher also collectsdifferent information from the respondent who founds in the sample population by using primary data collection methods. The main instruments for this paper the researcher uses as a primary data collection isquestionersurvey.

3.3.2. Instrument of Data Collection

The questioner is design by combining open and closed ended type. The question are derived from the standardized TAM2 model by modifying the content to be compatible with the researchissues, which is factors affecting the adoption of POS terminals by business organization. The questionnaire survey has three parts, in the first section respondent asked their demographic character. Secondsection contain level of agreement or disagreement to the perceived usefulness, perceived ease of, job relevance, job quality, Result demonstrability and image by using Likert scale.Then finally they asked the problem that faces frequently when using the machine and the recommendation they have.

3.4 Procedures of Data Collection

Data for this paper were gathering from the population which is found in the sample by asking their voluntariness of the respondent through using a questioner. Firs a questioner were having two parts designed based on the common TAM2 scale item by modify the items to fit with the objective. Before distributing the total questioner the researcher will distribute the sample questioner for the purpose of testing wither the questioner are easily understood by the respondent .After that a total of 132 questioner surveys were prepared based on the comment respondent gives and distributed to different business organization who are in the sample population. The questioner surveys were collected on the day that the respondents assign and also by giving phone number to inform the researcher when they finish the questioner and collect the paper personally.

3.5 Data Analysis

To analyze the data which collect from different source of data the researcher use qualitative analysis methods. Table is the only means the researcher to analyze the data.

In the first part demographic variables of the respondent i.e. age, gender and education level of respondent response are analyzed and described. In the second part the variable that derived from TAM2 model are analyzed and describedusing descriptive statistic through

percentage. These variables are perceived usefulness, perceived ease of use, image,job relevance, output qualityandresult demonstrability.

3.6 Reliability Test

Table: Summary of Cronbach' Alphas

Measurement Items (Interval Scale)	Items Cronbach' Alpha	Reliability	Results
Perceived Usefulness	4	0.87	Good
Perceived Ease of Use	4	0.86	Good
Image	3	0.80	Good
Job Relevance	2	0.80	Good
Output Quality	2	0.82	Good
Result Demonstrability	3	0.80	Good

This research used the most popular test of inter-item consistency reliability that is the Cronbach's coefficient alpha and has been used to identify the validity of items used in survey. According to Sekaran (2000), reliabilities less than 0.6 are considered to be poor, those in the 0.7 range, acceptable, and those over 0.8 good. The closer the reliability coefficient gets to 1.0, the better.

3.7 Ethical considerations

In order to keep the confidentiality of the data given by respondents, the respondents were not required to write their name and assured that their responses will be treated in strict confidentiality. The purpose of the study was disclosed in the introductory part of the questionnaire. Furthermore, the researcher tried to avoid misleading or deceptive statements in the questionnaire. Lastly, the questionnaires were distributed only to voluntary participants.

CHAPTER FOUR

RESULT AND DISCUSSION

4.1 Demographic Characteristics

This section outlines the findings on the demographic characteristics of the sample, which includes age of the respondent, gender and education level.

Table 4.1: Demographic Characteristics

Item	Frequency	Percent
Age 18-24	40	34.19
25-44	45	38.46
45 -54	21	17.95
55-65	11	9.4
66 and above	0	0
Total	**117**	**100**
Item	Frequency	Percent
Gender Male	31	26.5
Female	86	73.5
Total	**117**	**100**
Item	Frequency	Percent
Gender Male	31	26.5
Female	86	73.5
Total	**117**	**100**

Source: Primary Data (2017)

As shown in the following table the age of the respondent which was measured by four items, between 18-24, between 25-44, between 45-54 and 55-65 presented and discussed in brief.

According to Table 4.1 the age of the sample population was largely dominated by the age range comprising 25-44 (45 or 38.46%) of the total respondents, followed by the age group that fall between 18- 24(40 or 34.19%). The list available age group in the sample was the age group that comprising respondents between 45-54(21 or 17.95 %) followed by the age group 55-65 years which account 9.4% or 11 of the total sample population. Thus one possible explanation for the dominance of young respondents could be that they are more likely to be interested and nonresistant in the usage and adoption of new technology such as POS terminals than the older one.

The other demographic character of the respondent is gender and presented with respective frequency of occurrence in the data and percentage.

Among the randomly distributed questionnaires 31 or 26.5% of respondent were male and the rest 86 or 73.5% were female as shown above. This data shows that male are largely dominate by female, the reason behind his occurrences is female are more wanted by those sector than male. So type of business organization is more suitable for female than male.

Regarding the education status of the respondent the student researcher used four items to measure their educational level i.e. Primary school, high school, Technicaland College or University graduate, and the result presented in the following table.

Educational status of the respondents shows that most of the organization employees who run the POS machine are technical school (55 or 47%) followed by employees who complete college or university (42 or 35.9%). Out of the total sample respondent 20(17.1%) respondent complete high school and there is no respondent which belong to primary school. Thus from this result one could conclude that those who performs the POS machine to transact for business organization have a higher educational background. These scenarios simplify the adoption of POS terminals because those respondent educational levels indicate that they are more close to technology

4.2 Detailed Data Analysis

This portion of the chapter deals with the presentation and analysis of respondents responses. For the sake of simplicity the detailed data presentation analyzed and interpreted independently by taking the six independent variables: perceived ease of use, perceived usefulness, image, job relevance, output quality and result demonstrability.

3.3.1 Perceived Usefulness

According to Davis (1985) people tend to use or not to use a system to the extent that they believe it will help them perform their job better (perceived usefulness). To develop measurement scales for perceived usefulness similar to perceived ease of use the student researcher adopts the items from the TAM2 developed by Davis and Venkateshand present the result as follows.

Table 4.4Perceived Usefulness

Perceived usefulness	Respondent	
Item	**Frequency**	**Percent**
1.Using POS terminal can improve the performance of the cashers		
A. Strongly disagree	11	9.40
B. Disagree	15	12.82
C. Neutral	12	10.26
D. Agree	41	35.04
E. Strongly agree	38	32.48
Total	117	100.00
2.Using POS terminal can increase the productivity of the organization		
A. Strongly disagree	7	5.98
B. Disagree	25	21.37
C. Neutral	15	12.82
D. Agree	39	33.33
E. Strongly agree	31	26.5
Total	117	100
3.Using the POS terminals can enhance the effectiveness of the user		
A. Strongly disagree	15	12.82
B. Disagree	17	14.53
C. Neutral	36	30.77
D. Agree	25	21.37
E. Strongly agree	24	20.51

Total	117	100
4. I found that POS terminals are useful for business organization.		
A. Strongly disagree	9	7.69
B. Disagree	15	12.82
C. Neutral	35	29.91
D. Agree	31	26.5
E. Strongly agree	27	23.08
Total	117	100

Source: Primary Data (2017)

Whether to know POS machine is useful or not the student researcher forward four various items and most dominantly the respondent agreed with the statement. As a result for the first item respondent asked if using POS terminal can improve the performance of the cashers and 41(35.04%) respondent agree with the statement and 38 (32.48%) of them said strongly agree. Similarly 15 (12.82%) respondent disagree and 11 (9.40%) respondent said strongly disagree to the forward statement. The rest 12 (10.26%) respondents said neither agree nor disagree (Table 4.4item 1). Based on this finding one can say that POS machinecan improve the performance of the cashers than by using other methods**.**

Indeed, more than half of the respondent believes that using POS terminal can increase the productivity of the organization and account 33.33% (39) of the total respondent are agree. Similarly 26.5% (31) of the respondent said strongly agree and 15 (12.82%) respondent remain neutral regarding the stated statement. Moreover 7 (5.98%) respondent strongly disagree with the statement and the remaining 25 (21.37%) respondent said disagree with the statement (Table 4.4 item 2). Similar to the above result this one also shows us using POS terminal can increase the productivity of the organization. Concerning the question whether using the POS terminals can enhance the effectiveness of the user similar to the rest question most respondent, 24 or 20.51%, strongly agree with the statement. Likewise, 25 (21.37%) respondent said agree and 36 (30.77%) of them stay neutral. However, 15% (12.82) of the

total sample strongly disagree with the question and the rest 17 (14.53%) respondent said disagree (Table 4.4 item 3). So hence using the POS terminals can enhance the effectiveness of the user.

At the end respondent invite to forward their believe about the overall usefulness of the POS machines based on the above listed items and most of them (27 or 23.08%) strongly agree that the machines help them to finish what they want at short time and more quickly. Likewise 31(26.5%) respondent said agree and 35 (29.91%) of them neither agree nor disagree about the statement. The rest level of disagreement, strongly disagree and disagree, hold by 9 (7.69%) and 15 (12.82%) number of respondents respectively (Table 4.4 item 4). Generally, most respondent believe that the POS terminals are useful for business organizationto perform job effectively. Therefor perceived usefulness affects the adoption of POS terminals by business organization positively.

3.3.2 Perceived Ease of Uses

According to Davis perceived ease of use is the extent to which a person believes that using a particular system will be free of effort. Perceived ease-of-use is a person's subjective perception of the effortlessness of a computer system, which affects the PU thus having an indirect effect on a user's technology acceptance.

Table 4.5Perceived Ease of Uses

Perceived ease of uses		
Item	Frequency	Percent
5. The interaction with the POS machine is clear and understandable.		
A. Strongly disagree	12	10.26
B. Disagree	16	13.68
C. Neutral	27	23.07
D. Agree	37	31.62
E. Strongly agree	25	21.37
Total	117	100
6. Operating the POS machine does not require a lot of mental effort		
A. Strongly disagree	14	11.96
B. Disagree	17	14.53
C. Neutral	31	26.49
D. Agree	43	36.76
E. Strongly agree	12	10.26
Total	117	100
7. I found the POS machine is easy to use.		
A. Strongly disagree	15	12.82
B. Disagree	21	17.95
C. Neutral	23	19.66
D. Agree	40	34.19
E. Strongly agree	18	15.38
Total	117	100
8. The POS machine is flexible and do I want to do.		
A. Strongly disagree	19	16.24

B. Disagree	30	25.64
C. Neutral	35	29.91
D. Agree	20	17.09
E. Strongly agree	13	11.12
Total	117	100

Source: Primary Data (2017)

To measure the attitude of respondents with regard to learning the technology effortlessly, the respondents asked about the interaction with the POS machine is clear and understandable,byusing five point Likert scale. As a result 25 (21.37%) of them strongly agree with the statement and 37 (31.62%) are agree with the statement. The rest 16(13.68%) and 12(10.26%) of respondents respectively says disagree and strongly disagree. Out of the total respondent 27(23.07%) of them are neutral about the statement (Table 4.5 item5)**.** From this response one can understood that the interaction with the POS machine is clear and understandable.

Thus, the respondent asked to state their level of agreement for the statement -Operating the POS machine does not require a lot of mental effort. Accordingly most respondent agree, 43or 36.76% of the total, respondent who are also agree with it and account 12 or 10.26% of the total sample population. Out of the total 31 (26.49%) respondent neither agrees nor disagrees about the statement and remains neutral. However, 14 (11.96%) and 17(14.53%) respondent strongly disagree and disagree with the stated statement respectively (Table 4.5 item6)**.** As mentioned in the literature reviews whether to use or not to use a particular technology significantly influenced by the simplicity and clarity of the system. As a result based on the response one can understand that operating the POS machine does not require a lot of mental effort.

The other question that was asked for the respondent to measure perceived ease of use was whether I found the POS machine is easy to use or not. Consequently, similar to the above result most respondent, 14(15.38%) and 40 (34.19%) of the total strongly agree and agree with the statement respectively. Likewise 23 or 19.66% of them were neutral about the statement and the rest 21 (17.95%) and 15 (12.82%) are disagree and strongly disagree with

the statement (Table 4.5 item 7).Based on this result one can conclude that most of them found the POS machine is easy to use.

The eighth item which is used to measure the easiness of the system is whether the POS machine is flexible and do they want to do. Thus, only 13(11.12) respondents strongly agree with the sated statement and 20(17.09) of the total sample population agree. Similarly,35(29.91) respondents are neutral about the statement and the rest 19 or 16.24% of the sample strongly disagree followed by respondent who are disagree with the question (30 or 25.64%) (Table4.5 item 8). From this item it is possible to conclude that the POS machine is not much flexible and able to do what they want to do.

3.3.3 Image

Image can be defined as the degree to which the use of an innovation is perceived to enhance one's image or status in one's social system (Rogers, 1983).

Polat, 2011,) defined image as "the vision, picture, or impression that is formed in individuals' mind, based on the data and information they gather through their interactions with the elements of an organization." Organizational image is the overall evaluation of people's views regarding an organization or system.

Table 4.6Image of Organization

Image		
Item	Frequency	Percent
9. Having the POS machine is a status symbol for the organization.		
A. Strongly disagree	17	14.54
B. Disagree	31	26.49
C. Neutral	34	29.06
D. Agree	21	17.95
E. Strongly agree	14	11.96
Total	117	100

10. Organization who use the POS machine for transaction have more prestigious than those who do not		
A. Strongly disagree	20	17.09
B. Disagree	29	24.79
C. Neutral	35	29.91
D. Agree	21	17.95
E. Strongly agree	12	10.26
Total	117	100
11. Organization who use the POS machine have a high profile		
A. Strongly disagree	12	10.26
B. Disagree	25	21.37
C. Neutral	33	28.2
D. Agree	35	29.91
E. Strongly agree	12	10.26
Total	117	100

Source: Primary Data (2017)

Whether to know POS machines is useful tools for creating image about the organization or not the student researcher forward three various items and the results discussed below. As a result for the first item respondent asked thathaving POS machine is a status symbol for the organization and most of the respondents are disagree with the statement i.e. 31(26.49%) respondent disagree with the statement and 17 (14.54%) of them said strongly disagree. Similarly 21 (17.95%) respondent agree and 14 (11.96%) respondent said strongly disagree to the forward statement. The rest 34 (29.06%) respondents said neither agree nor disagree (Table 4.6 item 9). Based on this finding one can say that having POS machinemay not a status symbol for the organizations.

Indeed, more percent of the respondent are not believes that organization who use POS machine for transaction have more prestigious than those who do not and account 24.79% (29) of the total respondent are disagree and17.09% (20) of the respondent said strongly

disagree and 35 (29.91%) respondent remain neutral regarding the stated statement. Moreover 21 (17.95%) respondent agree with the statement and the remaining 12 (10.26%) are strongly agree with the statement (Table 4.6 item 10). Similar to the above result this one also shows us organization those uses the POS machine for transaction may not have more prestigious than those who do not use.

Concerning the question organization that uses the POS machine have a high profile and most respondent, 34 or 29.91%, agree with the statement. Likewise, 12 (10.26%) respondent said strongly agree and 33 (28.2%) of them stay neutral. However, 25% (21.37) of the total sample disagree with the question and the rest 12 (10.26%) respondent said strongly disagree (Table 4.6 item 11).So from the above result we can say that organization who use the POS machine may have a high profile.

4.2.4 Job relevance

Job relevance is based on the system ability to support an individual job function. It is an individual's perception regarding the degree to which the target system is applicable to his or her job.Job relevance as a cognitivejudgment that exert a direct effect on perceived usefulness, (Venkatesh&Bala, 2008).

Table 4.7Job Relevance

Job relevance		
item	Frequency	Percent
12. On the job, using POS terminal is important		
A. Strongly disagree	5	4.27
B. Disagree	7	5.98
C. Neutral	39	33.34
D. Agree	45	38.46
E. Strongly agree	21	17.95
Total	117	100
13. On the job, using the POS terminal is relevance.		
A. Strongly disagree	13	11.12
B. Disagree	18	15.38
C. Neutral	43	36.75
D. Agree	29	24.79
E. Strongly agree	14	11.96
Total	117	100

Source: Primary Data (2017)

To assessthe opinion ofrespondents with regard to the relevancy of POS terminals on job, the respondents asked thaton the job, using POS terminal is important. As a result 45 (38.46%) of them agree with the statement and 21 (17.95%) are strongly agree with the statement. The rest 7(5.98%) and 5(4.27%) of respondents respectively says disagree and strongly disagree. Out of the total respondent 39(33.34%) of them are neutral about the statement (Table 4.7 item12)**.** From this response one can understood that using POS machine on the job is very important.

Thus, the respondent asked to state their level of agreement for the statement on the job, using the POS terminal is relevance. Accordingly most respondent neutral, 43or 36.75% of the total, respondent who are also agree with it and account 29 or 24.79% of the total sample population. Out of the total 14 (11.96%) strongly agrees with the statement. However, 13(11.12%) and 18(15.38%) respondent strongly disagree and disagree with the stated statement respectively (Table 4.7 item13)**.** As a result based on the response one can understand that on the job, using the POS terminal is relevance.

4.2.5Output quality

Output quality is the degree to which an individual believes that the system performs tasks necessary to his or her job (Venkatesh&Bala, 2008).

TAM2 posits that, over and above considerations of what tasks a system is capable of performing and the degree to which those tasks match their job goals (job relevance), people will take into consideration how well the system performs those tasks, which we refer to as perceptions of outputquality.

Table 4.8Output Quality

Output quality		
item	Frequency	Percent
14. The quality of the output I get from the POS machine is high.		
A. Strongly disagree	12	10.26
B. Disagree	27	23.07
C. Neutral	52	44.45
D. Agree	15	12.82
E. Strongly agree	11	9.4
Total	117	100
15. The is no problem with the quality the POS machine output		
A. Strongly disagree	30	25.65
B. Disagree	49	41.88
C. Neutral	15	12.82

D. Agree	14	12.82
E. Strongly agree	9	7.69
Total	117	100
Source: Primary Data (2017)		

To know about the output quality of POS machines the student researcher forward two questions and the results discussed below. The respondents asked thatthe quality of the output they get from the POS machine is high and most of the respondents are disagree with the statement i.e. 27(23.07%) respondent disagree with the statement and 12 (10.26%) of them said strongly disagree. Similarly 15 (12.82%) respondent agree and 11 (9.4%) respondent said strongly disagree to the forward statement. The rest 52 (44.45%) respondents said neither agree nor disagree (Table 4.8 item 14). Based on this finding one can say that respondents are not satisfy withe the output they get from using POS machine.

Indeed, more percent of the respondent are not believes that there is no problem with the quality of POS machine output and account 41.88% (49) of the total respondent are disagree and25.65% (30) of the respondent said strongly disagree and 15 (12.82%) respondent remain neutral regarding the stated statement. Moreover 14 (11.96%) respondent agree with the statement and the remaining 9 (7.69%) are strongly agree with the statement (Table 4.8 item 15). Similar to the above result this one also shows us organization those uses the POS machine for transaction may face a problem on the output.

4.2.6 Result demonstrability

Result demonstrability implies that individuals will have a more positive attitude about the system usefulness if the differences between usage and positive result can be easily observed.

It is the tangibility of the result of using the innovation. This implies that individuals can be expected to form more positive perceptions of the usefulness of a system if the covariation between usage and positive results is readily discernable.

Table 4.9Result demonstrability

Result demonstrability		
item	Frequency	Percent
16. I have no difficulty talking other about the result of using the POS machine.		
A. Strongly disagree	14	11.96
B. Disagree	21	17.95
C. Neutral	36	30.77
D. Agree	38	32.48
E. Strongly agree	8	6.84
Total	117	100
17. The result of using POS machines an apparent (clear) for the user.		
A. Strongly disagree	13	11.12
B. Disagree	25	21.36
C. Neutral	27	23.08
D. Agree	37	31.62
E. Strongly agree	15	12.82
Total	117	100
18. It would difficult explain why using the POS terminal may or may not be beneficial.		
A. Strongly disagree	17	14.53
B. Disagree	31	26.49
C. Neutral	32	27.35
D. Agree	23	19.66
E. Strongly agree	14	11.97
Total	117	100

Source: Primary Data (2017)

For the purpose of finding whether the result of using POS machines is demonstrable or not the student researcher forward a question for the respondent and the results discussed below. As a result for the first item respondent asked thatthere is no difficulty talking other about the result of using the POS machine and most of the respondents are agree with the statement i.e. 38(32.48%) respondent agree with the statement and 8(6.84%) of them said strongly agree. Similarly 21 (17.95%) respondent disagree and 14 (11.96%) respondent said strongly disagree to the forward statement. The rest 36 (30.77%) respondents said neither agree nor disagree (Table 4.9 item 16). Based on this finding one can say that talking about the result or output of POS machine is not difficult.

Thus, the respondent asked to state their level of agreement for the statement the result of using POS machines an apparent (clear) for the user. Accordingly most respondent agree, 37or 31.62% of the total, respondent who are also strongly agree with it and account 15 or 12.82% of the total sample population. Out of the total 27 (23.08%) are neutralwith the statement. However, 13(11.12%) and 25(21.36%) respondent strongly disagree and disagree with the stated statement respectively (Table 4.9 item17)**.** As a result based on the response one can understand that the result of using POS machines is apparent for the organization.

Concerning the question that organization using POS machine faces challenges explain about using the POS terminal may or may not be beneficial and most respondent, 31 or 26.49%, disagree with the statement. Likewise, 17 (14.53%) respondent said strongly disagree and 32 (27.35%) of them stay neutral. However, 23% (19.66) of the total sample agree with the question and the rest 14 (11.97%) respondent said strongly agree (Table 4.9 item 18). So from the above result we can say that organization that use the POS machine did not faces challenges to explain about using POS terminal may or may not be beneficial.

CHAPTER FIVE

4. CONCLUSION AND RECOMMENDATION

5.1 Finding of the Study

Based on the respondent response and the data analysis the following output are founds.

When we see the demographycharacteristic, most of the respondents have good educational backgrounds. This educational background helps them to be closer to different technology and make them easily understand the function of those machines.Therefore the user's good educational background affects the adoption of POS terminals by business organizations positively.

According to the analysis most organizations perceive that the adoption of POS terminals have benefits on their day to day business activities through avoiding different activate, like counting physical cash, forgery note, mistakes on giving changes and also simplify the cash flow control system. Therefore the perceived usefulness of POS machine affects the adoption of the system positively.

In some business sectors adoption of POS terminals uses as image building mechanism. Specially, hotel and restaurants uses POS machine as one of differentiate methods for their services. So adopting a POS machine has a contribution on image building in some business sectors.

Even if the adoption of POS terminals has different benefit, there are some obstacles that hinder the usage negatively. From those obstacle interruption of internet connection is the major problem that affects adoption of POS terminals by business organization, so the poor output quality of the machine affects the adoption of merchant POS machine.

5.2 Conclusion

Based on the analysis made in chapter four the following conclusions are made on the assessment of factors affecting the adoption of point of sale terminals by business organization in Addis Ababa. This study prepared by using TAM2 model with the variable of, PU, PEOU, job relevance, output quality, result demonstrability, and image

The importance of POS cannot be overlooked because it is one of the electronic means of transaction. In the case of our country transacting by POS is in infant stage. Even though to change this situation government and banks apply different strategy and distributing the machine to different business organization by their own cost majorities of the business organization have not adopted this technology and are using traditional methods to serve their clients. This shows that additional strategy need to apply.

However in some business sector, like hotel and restaurant and super market the usage of POS terminals shows some progress. This shows that the understanding of usefulness of POS machine is increasing.Not only the usefulness but also the easily accessibility, relevance's and the contribution of the machine on their jobis high. To heighten this change to all business sectors all stakeholder need to create awareness and convinces to use this technology for their business transaction.

Even if the usage of POS terminal shows a progress, organization are not satisfied with the quality of the output. The reason behind the dissatisfaction is there is interruption of system and enable to produce receipts.

This study has contributed to knowledge by providing relevant information that could assist stakeholders in the sector to be well informed about the factors that could be influencing the adoption of POS. This study could serve as a motivation for banks to intensify efforts to deploy more POS to organizations in the locations of study as well as other parts of the country to further promote the adoption of POS among organizations that are yet to adopt. As a critical factor for success, the necessary infrastructure, such as internet access, that would make the cash-less society to work should be made available. The study has some limitations in that the population was limited to a geographical area of the country, therefore, the findings may not be generalized to the entire country. Study from other parts of the country

may reveal a different result due to geographical differences and nature of businesses in other parts of the country.

The model adapted for this study was developed from another country. This may not perfectly describe the phenomenon and situation in Ethiopia. These limitations notwithstanding, the findings of this research have contributed to literature in the area of technology and society.

5.3Recommendations

- As per the findings from the analysis of the collected data; the following recommendations are forwarded in order to promote and develop POS usage by business organization.

- Most of the organizations are not aware about the benefit of POS machine therefore banks have the responsibility of crating awareness and made a massive promotion campaigns.

- The main challenge of adopting technology in this country is interruption of internet access. So to change the existing scenario the internet access must be improved.

- Using POS machine for business transaction is new trend in this country and organization may face different challenge to operate the machine. To solve this kind of problem the bank officials have to follow-up the business organization regularly.

- When the customer buy something through POS machine the bank account are debited but the merchant account not credited immediately rather it credited after reconcile by the bank.so if this reconciliation process take long time the merchant will be dissatisfied because they need money run the business because of that the bank must shorten the reconciliation process and deposited to the merchant account as soon as possible.
- As it is known bank give some incentive for customer who uses visa card when purchase something. Applying these practice also good for business organization for thiere motivateion to transact with POS machine aggressively.

- Increasing the deployment of POS machine to different business organization whether it is small or large.

- In the card holder side there is awareness gap about the other benefit of the cards, therefore banks must createawareness to their customer they can purchase goods and service from different merchants when they distribute their cards.

5.4 Recommendation for Further Research

This study only focus on the factor that affect adoption of POS machine by business organization however other researcher can assess on the buyer or visa card holder side by applying different technology acceptance model.

The other thing in this study the student researcher focus only commercial bank of Ethiopia POS machine so other researcher can examine other banks POS machine and made a comparative research.

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APPENDEX

St. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DEPARTMENET OF MARKETING MANEGMENT

QUESTIONNAIRE TO BE FILLED BY POINT OF SALE USERS ORGANIZATION

Dear respondent,

The purpose of this study is for the practical fulfillment of the researcher's Master's Degree Program in Marketing Management at St. Mary's University. I am undertaking a thesis on the topic: Assessment on factors that affect the adoption of POS terminals by business organization.

The researcher would like to confirm to you that the respondents as well as the data obtained through this questionnaire will remain confidential and will be used only for an academic purpose.

· Thank you for your time and cooperation in advance.

Instruction

Please put a √ mark corresponding to your answer choices for each of the attached questions.

To be filled out by organization who uses CBE's POS machine.

Section I: Please put tick (√) in the space in front of your options:

Profile of Respondent

1. Gender: □Female □ Male

2.Age:

18-24 25-44 45 -54 55-65 66 and above

3. Education Level

Primary school completed (1) high school (2) Technical school (3) College or University (4)

Section II: Please indicate whether you agree or disagree with each statement by ticking (√) on the spaces that specify your choice from the options that range from Strongly Disagree to Strong Agree.

Note:-**SA**= strongly agree **A**= Agree **N**=Neutral **D**= Disagree **SD**= strongly disagree

Perceived usefulness	**SA**	**A**	**N**	**D**	**SD**
1. Using POS terminal can improve the performance of the cashers. 2. Using POS terminal can increase the productivity of the organization. 3. Using the POS terminals can enhance the effectiveness of the user. 4. I found that POS terminals are useful for business organization.					
Perceived ease of use					
5. The interaction with the POS machine is clear and understandable. 6. Operating the POS machine does not require a lot of mental effort? 7. I found the POS machine is easy to use. 8. The POS machine is flexible and do I want to do.					

Image	**SA**	**A**	**N**	**D**	**SD**
9. Having the POS machine is a status symbol for the organization. 10. organization who use the POS machine for transaction have more prestigious than those who do not 11. organization who use the POS machine have a high profile					
Job relevance					
12. On the job, using POS terminal is important 13. On the job, using the POS terminal is relevance.					
Output quality	**SA**	**A**	**N**	**D**	**SD**
14. The quality of the output I get from the POS machine is high. 15. The is no problem with the quality the POS machine output					
Result demonstrability					
16. I have no difficulty talking other about the result of using the POS machine. 17. The result of using POS machines an apparent (clear) for the user. 18. It would difficult explain why using the POS terminal may or may not be beneficial.					