



**ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE DEPARTMENT  
OF MARKETING MANAGEMENT POST GRADUATE PROGRAM**

**THE EFFECT OF POINT OF SALE (POS) SERVICE  
QUALITY ON CUSTOMER SATISFACTION: THE CASE  
OF COMMERCIAL BANK OF ETHIOPIA**

**A thesis Submitted to the School of Graduate Studies of Addis Ababa  
University in Partial Fulfillment of the Requirements for the Degree of Master  
of Arts in Marketing Management**

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**JUNE, 2020**

**ADDIS ABABA**

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### **Statement of Certification**

This is to certify that Lidiya Bezabih Abebe has done a study on the topic “The Effect of POS Service Quality on Customer Satisfaction: The Case of Commercial Bank of Ethiopia. This study is of her original work and all the sources of materials used for the research project paper had been duly acknowledged.

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June, 2020

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The Effect of POS Service Quality on Customer’s Satisfaction: A study  
on Commercial Bank of Ethiopia

By: Lidiya Bezabih

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### **Statement of Declaration**

I Lidiya Bezabih hereby declare that the thesis entitled ‘The Effect of POS Service Quality on Customer Satisfaction; the case of Commercial Bank of Ethiopia was carried out by me for the degree of Masters in Marketing Management of Addis Ababa University School of Commerce under the guidance and supervision of Dr.Mulugeta G/Medhin and certify that this thesis has not previously been submitted for assessment in any other university.

I also certify i have acknowledged all the materials and sources used in the thesis preparation, whether they are books, articles, reports, lecture notes, and any other kind of document, electronic or personal communication.

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## ACRONYMS

ANOVA	Analysis of Variance
ATM	Automated Teller Machine
BSQ	Banking Service Quality
CBE	Commercial Bank of Ethiopia
CLRM	Classical Linear Regression Model
E-banking	Electronic Banking
MIS	Management Information System
POS	Point of Sale
ROA	Return on Asset
SPSS	Statistical Package for Social Sciences
SERVPERF	Service Performance Model
SERVQUAL	Service Quality Model
VIF	Variance Inflation Factor

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Lidiya Bezabih

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## **ABSTRACT**

*The purpose of this study is to investigate identify the effect of POS service quality on the customer satisfaction in the case of CBE. The research used BSQ model to investigate factors affecting customer satisfaction. Simple random sampling was used to solicit response from selected 260 respondents through questioner. The study employed correlation and multiple regression analysis after the violation tests and reliability test were conformed through the use of SPSS version 23 software. The Result showed that, there is a significant relationship between customer satisfaction and factors under the study. The regression result implies Effectiveness and assurance, Pricing and reliability were conformed there is a positive significant association with customer satisfaction. Whereas, tangibility had a significant but negative association with customer satisfaction. The study suggests the bank need to emphasize on the issue of Tangibility on the sites. It should enhance the service portfolio of POS.*

***Key words: Banking Service Quality (BSQ), POS Service Quality, Customer Satisfaction, Commercial Bank of Ethiopia (CBE)***

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# CHAPTER ONE

## 1. Introduction

### 1.1 Background of the Study

Electronic banking is considered as a new emerging of the modern banking services which offers customers the greatest convenience for performing banking transactions via several electronic channels. All banks, especially the state owned and private banks, have gradually adopted different e-banking services and progressively increased the number of electronic banking services available to customers over the past decades. (Momeni, 2013).

Banks play a significant and active role in the financial and economic development of a country. An effective banking system prominently influences the growth of a country in various sectors of the economy. Experts in the banking industry face a large number of complex challenges in the global marketplace. Understanding the ever changing customer needs and adopt the latest information technology system to effectively compete with global organizations is vital for all banks.(Malhotra & Mukherjee, 2004).

Digital payment systems technologies have risen to position as a critical determinant of economic growth and market competitiveness. With the continuous growing of information technology and the internet, payment systems have taken a new direction, as electronic money is steadily replacing paper money and coins. Traditional payment instruments like bank notes and coins are gradually phasing out as an acceptable mode of payment for transactions as more electronic payment channels become applied and perceived as better alternatives across the world. Bonugli (2006).

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Point of sale terminals emerged in 1979, when Visa introduced a bulky electronic data capturing terminal which was the first payment terminal. In the same year magnetic stripes were added to credit cards for the first time. This allowed card information to be captured electronically and led to the development of payment terminals. ([https://en.wikipedia.org/wiki/Payment\\_terminal](https://en.wikipedia.org/wiki/Payment_terminal)).

Financial institutions predominantly banks are competing in similar products; as a result, services quality grows to be a main competitive weapon. Due to pervasive and steady growth of information and communication technology, the form of competition among banks that is supported by modern information and communication infrastructure started to grow through time. Stafford (1996).

Customer satisfaction is the major issue for the business that is operating in technology based services and related services. Good customer service quality is the main factor that will determine; in the future whether the business will survive or fail. Due to the rapid technology change and market competition, service quality becomes an increasingly important issue. Consequently, placing a great consideration to a service quality issue becomes very important to satisfy the customer. Broderick (2008).

The Commercial Bank of Ethiopia is a pioneer in the establishment of electronic banking services in Ethiopia starting from 2002G.C by initially start rendering ATM services through deploying of eight ATMs. Since then, the Bank has been in continuous efforts to enhance its electronic banking existence & accessibility in the market in which in year 2009 G.C it has started rendering Point of Sale services by deploying the POS terminals at different business sites in Addis Ababa. CBE (2019).

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As a major objective to fulfill its vision of becoming world class bank by 2025, the commercial bank of Ethiopia is transforming its manual payment system into electronic means of payment. The Bank adopted modern electronic means of payments such as ATM, Mobile banking, Internet banking, POS and different Card products and brought to the market throughout Ethiopia. However, apart from building the necessary infrastructure, more has been expected from the bank to influence the traditional cash preferring culture of the society into embracing digital banking.

According to the data obtained from the bank's MIS, in 2017/18 fiscal year, CBE was able to conduct a total card transaction amount of USD 2.7million. Among the total value of card transaction processed in 2017, 90% of the card transactions were conducted on the bank's ATM terminals while 10% of the transactions were conducted on POS machines deployed both at the bank's branches and merchant sites. Among the total value of the POS transactions in 2018, merchant's POS payments took only 14% while 86% of transactions were cash advance transaction that are processed only at Bank's branches where conventional banking services are provided. CBE (2019).

Despite the small share of the POS transaction at merchant sites, CBE is working towards the future by improving its card payment service and diversifying its electronic payment channels by employing different promotional and selling strategies that are very appealing to customers. 2 % cash back provided upon each purchase made on POS terminals deployed at merchant sites were one of the strategies implemented in this regard. CBE (2018).

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Even though, there are no studies conducted so far as to why the performance of POS services is not growing time to time, service quality might be the likely reason for the poor performance of the POS services of the bank delivered to its respective merchants.

In view of that, in this research paper, the POS service quality rendered by the Commercial Bank of Ethiopia is further investigated to the extent what it actually created towards its customer satisfaction.

## **1.2 Statement of the Problem**

A Point of Sale (POS) terminal is a device that provides customers of banks with access to their bank account to make purchase of goods and services in different commercial centers where this specific mode of payment is deployed. The inference of this is that customers can make payment for goods and services without essentially coming in contact with physical cash as the purchase price would directly be debited from the buyer's bank account and credited on the seller's account upon the completion of the purchase transaction.(Olanipekun et al, 2013).

This machine solves the problem of carrying cash and theft for the customers and significantly decreases cash handling and management cost for both financial institutions and different business owners. Moreover, POS accept not only domestic debit and prepaid payment cards, but also international debit and credit payment cards. This gives a great opportunity for Ethiopian merchants in widening their source of income, through entertaining all types of their customers whether they are paying for the purchase using payment cards or physical cash. Addis Fortune (2015).

Moreover, apart from widening the choice of payment for both cardholders and merchants themselves, having a POS machine reduces the manual processes involved in serving customers

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and permits 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.

In Ethiopia, this practice has a very short history. The Commercial Bank of Ethiopia (CBE), a pioneer of this service, has started the deployment of the POS technology as a means of serving its customers in 2009 G.C. In addition to CBE, other banks in the private sector has also started availing the machines in selected big institutions, such as starred hotels, supermarkets, electronic house and restaurants afterwards. Addis Fortune (2015).

However, even if POS services have entailed several benefits to all stakeholders involved in such business, it doesn't mean it is free from drawbacks. It has encountered a challenge such as poorly developed telecommunication infrastructure, a security challenge as they highly depend on critical ICT systems, failure to access and effect the transfer of funds due to technical imperfections from its own side and resistance to changes in technology among customers and staffs due to lack of awareness on the benefits of new technologies. CBE (2019).

To this effect, as at Dec 31, 2019, out of 3,399 POS machine that CBE deployed across its 15 districts in Ethiopia, **3,377** of them are being reported to be active, meaning a certain card transaction performed at least ones after the deployment of the POS at merchant and branch premises. However, from the reported active number of POS, **2079** POSs are deployed at merchant sites in Addis Ababa while the remaining **1298** POSs are currently being deployed at outlying merchant sites and in the bank's branches where they are consumed as 'cash advance' serving merely money withdrawal by CBE cardholders. CBE MIS (2019).

Due to the development of different electronic banking channels and the operational alteration of the way bank do business as well as the change in customers need, providing more desirable and

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better services and development of e-banking services to the customers was found unquestionably indispensable and this has led to an increased number of ATM and points of sale (POS) services being provided by banks to the public worldwide. Unfortunately, mostly in developing countries, it seems that appropriate and adequate awareness creation and culture has not been made for different groups of people and societies to utilize electronic payment channels properly equally with the development and adoption of electronic banking infrastructures. This has created a huge gap on penetrating the market with such solutions and position the electronic products in customer's mind and POS services are not exception to this. Javadin(2008).

Despite the fact that the aggressive usage of the POS by customer is still at infant stage, the banking industry is facing a strong competition due to technological advancement and better communication systems emerging worldwide. Key to success and survival of any business is the deliverance of quality services to customers and this has a direct impact on the ultimate success of any banking services including POS. As a matter of fact, financial services provided by banks are commonly undifferentiated products. The best option banks can differentiate themselves is by offering customers an alternative electronic channels and improved service quality which is critical for the expansion of customer base in particular and market share in general. Shafie (2004).

While there is volume of studies on electronic-banking products and services such as ATM, Mobile and Internet Banking and other electronic banking services, there has been dearth of literature on POS banking services, especially studies on its service quality impact on customer satisfaction in the context of commercial Bank of Ethiopia, hence the imperative for this study.

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Among the conducted studies on e-banking related topics, Sintayehu(2015) have studied ‘the impact of E-banking Services On customer satisfaction, Bethlehem (2018) has done her research on ‘E-banking Services and Performance of TOP performers’, Sabharwal, Munish (2014) has assessed about the installation of POS (Point of Sale) terminals by Indian Banks and Adeoti (2013) examined about Challenges to the efficient use of Point of Sale (POS) terminals in Nigeria. However, none of these studies have addressed the effect of POS service Quality on Customer Satisfaction.

Moreover, most previous researches conducted on digital or electronic banking in general recommended many solution by applying different service quality model measuring customer satisfaction, typically, the GAP model of service quality (Parasuraman, Zeithaml, & Berry, 1985) and the SERVQUAL approach (Parasuraman et al., 1988) that measures service quality using 22 items that are associated with the five service quality dimensions (tangibles, reliability, responsiveness, assurance and empathy) are verified in many different markets and countries.

The researcher believes that previously almost no research has been done in this specific topic in the city to provide empirical evidence of the effect on customer satisfaction of POS services. Besides, many of their results indicated that models and measurement scales of service quality are varied in conformity with every type of service, and every market or country (Bakakus, & Boller, 1992; Behara, Fisher, & Lemmink, 2002; Robinson, 1999). And in banking industry, bank service quality is commonly noted as a critical prerequisite for satisfying and retaining valued customers (Taylor & Baker, 1994). Bearing this in mind, Bahia & Nantel (2000) proposed a specific scale, the BSQ (Bank Service Quality) for measuring perceived service quality in retail banking.

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BSQ is exclusively dealing with the perceived service quality within the special context of banks. Thus, this study applied BSQ model as it is specifically designed for measuring retail banking, which is also acceptable and the latest model as compared to SERVEQUAL model. Moreover, Bahia & Nantel (2000) argued that the main strength of BSQ for banking business is its content validity. For instance, the services portfolio dimension and the price dimensions of BSQ are absent from SERVQUAL model. It is for this reason (content validity) that the BSQ was chosen for use in the present study. Therefore, this study endeavored to fill the gap of empirical research by conducting a study on effect of POS service quality on the customer satisfaction in the case of CBE applying bank service quality measuring model.

### 1.3 Research Question

The study was targeting the direct customers (merchants) of CBE residing in the four districts of Addis Ababa as the majority of the POS service is being provided in the city. I.e. out of the 3,399 total numbers of the active merchants of the bank who are using the POS machine as one of the payment mode for their business, 2079 of them are located in Addis Ababa engaged in different types of business activities as at Dec 31, 2019. Moreover, from the total number of merchants located in the city, 206 of them are labeled as corporate merchants of the bank which are of course located in Addis Ababa. CBE (2019).

Thus, the research question was intended to address the following question so as to examine the customer's satisfaction of the POS services rendered by CBE;

- ✓ How do the **effectiveness and assurance** dimension of POS service affect the level of customer's satisfaction at CBE?
- ✓ How does the CBE's POS service **accessibility** affect customer satisfaction at CBE?

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- ✓ To what extent the **price** dimension of the POS service affects customer satisfaction at CBE?
  - ✓ How does the CBE's POS machine **tangibility** affect customer satisfaction at CBE?
  - ✓ To what extent the **service portfolio** dimension of the POS service affect customer satisfaction at CBE?
  - ✓ How does the **reliability** dimension of the POS machine affect customer satisfaction at CBE?

#### **1.4 Objective of the Study**

##### **General Objective of the study**

The general objective of the study is to identify the effect of POS service quality on the customer satisfaction in the case of CBE.

##### **Specific Objective of the study**

This study attempts to achieve the following specific objectives;

1. To examine the effect of 'effectiveness and assurance' of POS services on customer satisfaction at CBE.
2. To explore the effect of 'Accessibility' of POS service on customers' satisfaction.
3. To investigate the effect of 'Price' of POS service on customer satisfaction at CBE.
4. To examine the effect of 'Tangibility' of POS on customer satisfaction at CBE.
5. To investigate the effect of CBE's POS 'service portfolio' on customer satisfaction.
6. To examine the effect of 'Reliability' of POS services on customer satisfaction at CBE.

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### **1.5 Significance of the Study**

The findings of this study will contribute greatly to the benefit of Commercial Bank of Ethiopia, other private banks engaged in conducting such business, to the researcher and other researchers who will be studying POS related topics in the future as well. Moreover, applying the recommendation from the results of the study will enable CBE, other private banks and stakeholders to identify the critical area where the service improvement is required concerning the provision of POS services. To the researcher, making such a research will expose to the field of area and add to the stock of knowledge he or she already has. Besides, the researcher will also gain a great experience on how a research is conducted. To other researchers, who will attempt to study in a related area, this research work will help them as being a stepping stone for their research work.

### **1.6 Scope of the Study**

According to the data provided by the Digital Channel Business department of the bank, CBE, as of Dec 31, 2019, has been providing POS services for several merchants across Ethiopia where 61% of the merchants are located in the four districts of A.A. Thus, the study is limited only in making its research on the merchants found only in Addis Ababa referring the fact that the large numbers of POS users (merchants) are concentrated in the city as well as due to the time and associated cost constraint in this regard. In addition, the research is limited to the POS services provided for the merchants that have a contractual agreement to use a POS machine of CBE. As a result, the research did not cover the POSs deployed at CBE's branch serving only cash withdrawal purpose. Moreover, the business sector of the merchants couldn't be identified due to the recently upgraded card banking system of the bank's feature, identifying merchants merely

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based on their predefined location (district) other than their business type. Thus, the business types of the merchants are not considered in the study.

### **1.7 Limitation of the Study**

The study was bounded to commercial bank of Ethiopia considering it being the pioneer of the service and its long experience in rendering the service as compared to other private banks. Moreover, in addition to this, outlying merchants of the bank was not included in the study due to their low share of the acquired POS machine and time and cost constraints in this regard. Hence, geographically, the study was restricted only on CBE merchants residing in Addis Ababa engaged in different businesses.

### **1.8 Definition of Terms**

- **Service** is defined as activity or benefit that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Kotler (2003).
- **Quality** – According to Jones and Lockwood, (1989) quality is defined as the totality of features and characteristics of a product or service that bears on its ability to satisfy given needs. Quality is defined as fitness for purpose.
- **Service Quality** – the comprehensive assessment or outlook of the overall excellence of services being provided to a number of stakeholders including the organization’s customers. (Parasuraman, Zeithaml and Berry (1985).
- **Customer Satisfaction** – (Kotler) defined satisfaction as: “a person’s feelings of pleasure or disappointment, resulting from comparing a certain product of perceived performance (or outcome) against his or her expectations”.

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- **Point of Sale (POS) terminal**- is a device that provides customers of banks with access to financial transactions in public places. (CBE).

### **Bahia and Nantel (2000) Bank Service Quality Dimensions**

- **Effectiveness and assurance:** effectiveness refers to the employee's willingness and readiness to deliver service effectively and willing and being ready to respond to customer complaints and inquiries in timely and substantive manner. Whereas, Assurance referring the possession of the required skills and knowledge to perform the service and instill confidence and trust in the minds of customers. Assurance implies also keeping customers informed in language they understand and keep customer's information confidential.
- **Access:** involves approachability and ease of contact. It further implies convenient hours of operation, convenient location of service facility and waiting time to receive service.
- **Price:** refers specific monetary form and measures the cost of service delivery.
- **Tangibles:** includes the physical evidence of the service; physical facilities, appearance of personnel, physical representations of the service such as credit cards, bank statements etc.
- **Service portfolio:** measures the range, innovation and consistency of services offered by banks.
- **Reliability:** measures the bank's consistency of performance and dependability. Meaning the firm performs the service right the first time and honors its promises.

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## **1.9 Organization of the Study**

This paper has contained five chapters, the first chapter deals with introduction of the study, that is, background, statement of the problem, research questions and objectives, significance and scope of the study. The second chapter discussed the theoretical and empirical literatures about the POS services in and outside Ethiopia wherever possible. The third chapter was deliberated the methodology of the research which is the research design, sampling technique, method of data collection, data collection instruments and method of data analysis. Chapter four covered results and discussions which entail summarized results of the study and interpretation of the results. The last chapter which is chapter five summarized concludes and forwarded possible recommendations.

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## CHAPTER TWO

### 2 Review of Related Literature

#### 2.1. Theoretical Review

##### 2.1.1 *The Concept of Service Quality & Satisfaction*

#### **Service Quality**

Defined as “the degree of discrepancy between consumer’s perceptions and expectations in terms of different but relatively important dimensions of the service quality, which can affect their future purchasing behavior.” Parasuraman et al (1985).According to Saghier, and Nathan (2013), service quality is an essential concept in the service industry and is more important for financial service providers who have difficulty in showing their customers product differentiation. Today, with growing competition, service quality has become a popular area for academic studies and has been recognized as a competitive advantage and supportive relationship with satisfied customers of any market offers of a certain business entity. (Zeithmal, 2000).Besides, quality of service has become an important tool to create satisfied and loyal customers in the service industry. Parasuraman (1988) has proposed five principal service quality dimensions, which are reliability, responsiveness, assurance, empathy and tangible that are often cited in different literatures and applied in most service industry as a best service quality measurement model. According to Parasuraman, tangibles are referred as physical facilities, equipment and appearance of personnel. Assurance is cited as knowledge and courtesy of employees and their capability to demonstrate trust and confidence. Empathy is defined as having caring employees and ability to give individualized attention. Responsiveness is addressed as the ability and readiness of employees to assist customers at earliest possible. And,

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reliability, is defined as the capacity to perform the pledged service without fail and correctly. Performing these dimensions appropriately contributes a lot to customer satisfaction.

### *2.1.2. Models for Measurement of Service Quality*

Even though, there are many models designed for service quality, the present study reviewed 11 service quality measurement models. The brief discussions on the models are asunder;

#### **SQ1: Performance-Perception Model**

The performance-perception model was developed based on the existence of four types of Performance-perception relationships showing the four service quality factors, namely satisfiers, dissatisfiers, critical and neutrals. In developing the four relationships between performance and perception, the simple relationship between service performance and customers' perception of that performance was first explored. From an initial relationship between performance and perception, the relationship was extended to include the three main outcomes of service quality, namely satisfaction, delight and dissatisfaction. Due to the existence of the zone of tolerance in the relationship between performance and perception and the sensitivity of these quality factors, the performance-perception model was developed to incorporate the four relationships. *Service industries Journal* (1988).

#### **SQ2: Attribute service quality model (Haywood-Farmer, 1988)**

This model states that a service organization has "high quality" if it meets customer preferences and expectations consistently. According to this, the separation of attributes into various groups is the first step towards the development of a service quality model. In general, services have three basic attributes: physical facilities and processes; people's behavior; and professional judgment. Each attribute consists of to this extended model, mostly involves communication and

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control process that need to be put in place in the organizations so as to properly manage employees to deliver services as demanded by customers.

**SQ3: Technology in delivery of perceived service quality by Joseph et al. (1999)**

The use of technology in the delivery of banking services is becoming increasingly prevalent as it is being employed to reduce costs and eliminate uncertainties. This research investigates the role that technology plays in Australian banking and its impact on the delivery of perceived service quality. Martilia and James (1977) developed a simple importance/performance technique whose most attractive feature is that the mean importance and performance results can be graphically illustrated on a two-dimensional grid. Hemmasi et al. (1994) redeveloped the importance-performance grid by drawing the axes based on the overall importance and performance means rather than based on the midpoint of the scale. Arguably, the Hemmasi et al. (1994) grid provides a useful alternative tool for strategy development as it provides a clearer picture of the factors that are critical for resource allocation.

The authors use the Hemmasi et al. (1994) importance-performance grid and identified a six factor model consisting of: convenience/accuracy, feedback/complaint management, efficiency, queue management, accessibility, and customization.

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#### **SQ4: Automated service quality model by Al-Hawari et al. (2005)**

Automated service quality has been regained as the factor which determines the success or failure of electronic commerce. The authors claim that the models currently available to measure automated service quality are limited in their focus, encompassing only one electronic channel – the internet – thereby ignoring attributes of the other automated service channels. In relation to the banking sector, the research has identified that bank customers tend to use a combination of banking automated service quality. As such, in this research, the authors strive to develop a comprehensive model of banking automated service quality taking into consideration the unique attributes of each delivery channel and other dimensions that have a potential influence on quality issues. They propose five factors as follows: ATM service, internet-banking service, telephone-banking service, core service, and customer perception of price.

#### **SQ5: Gronroos model (1983)**

The author identified three components of service quality, namely; Technical Quality, Functional Quality and Image

- **Technical quality of outcome (What is Provided):** Technical quality is the quality of what consumer actually receives as a result of his/her interaction with the service firm and is important to him/her and to his/her evaluation of the quality of service. Technical quality or outcome refers to real outcome of service after the service was evaluated. Outcome is what a customer receives from an organization. Service outcome is usually evaluated objectively by consumers.
- **Functional quality of process (How it is provided):** Functional quality is how customers get the technical outcome. It refers to the quality of processes and procedures

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in production and service provision for customers. Considering the process of production and consumption of services which are usually occurred simultaneously, process quality is usually evaluated by customer when doing a service. This element of quality refers to interaction between provider and receiver and is perceived mentally.

- **Corporate image:** Image is very important to service firms and this can be expected to build up mainly by technical and functional quality of service including the other factors (tradition, ideology, word of mouth, pricing and public relations). This dimension is related to customer's perceptions of service organization. Image depends on the quality of output, external relational activities, physical status, decoration and cleanliness of the company, price, competency and behavior of employees.

#### **SQ6: SERVQUAL Model**

The SERVQUAL model consists of 22 statements for assessing customer perceptions and expectations regarding the quality of a service which were grouped into five key dimensions (Parasuraman et al., 1991) that were identified as follows:

- Reliability - The ability to perform the promised service dependably and accurately.
- Tangibles -The appearance of physical facilities, equipment, personnel and communications materials.
- Responsiveness – the willingness to help customers and to provide prompt service.
- Assurance – the knowledge and courtesy of employees and their ability to convey trust and confidence.
- Empathy – the provision of caring, individualized attention to customers.

Many research studies and papers have used SERVQUAL scale to verify and to adjust in conformity with many different market situations and conditions. However, many other

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researchers have tested this model in many fields of service as well as in many different markets and countries, and their results show that service quality is not the same nor even similar in different service fields and markets. Therefore, it is necessary to have more research in order to model service quality in each service field and in each specific market. And the BSQ model was developed to measure banking service quality as suggested by Bahia & Nantel (2000), in particular.

### **SQ7: Customer expectations and perceived service quality by Ehigie (2006)**

In the attempt to study how customer expectation, perceived service quality and satisfaction predict loyalty among bank customers in Nigeria, measurement scales were developed to measure the variables of the study using qualitative technique to explore customers' expectations from bank services. The measure of bank customers' expectation in Nigeria were found to be; bank workers' possessions of required skill, knowledge, and experience, continuity of service to customers in future years, understand customer's needs, offering of fast and efficient service, providing physical safety to customer, confidentiality of transactions, positive attitude of staff to customer services, trustworthiness of bank, bank's good reputations, staff friendliness, keeping people informed, listening to customers, introduction of weekend banking, extended banking service hours and insurance cover for customers.

### **SQ8: SERVEPERF Model**

The model was developed to study banking, pest control, dry cleaning, and fast food sectors. It was established by Cronin and Taylor in 1992. It has almost the same dimensions of the SERVQUAL model. It is a modification of the SERVQUAL model and based upon the performance theory. It only considered customer perceptions of service performance. In this

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instrument, customers are only required to rate their perceptions of performance of the same attributes that are covered in the SERVQUAL model. The five dimensions, i.e. Reliability, responsiveness, tangibility, empathy and assurance, identified in the SERVQUAL model are equally applicable to the SERVPREF model.

**SQ9: CARTER model by Othman and Owen (2001, 2002)**

Othman and Owen (2001, 2002) study investigated the service quality by using SERVQUAL dimensions. Their study proposed an insight view that how to improve service and developed a model, called CARTER. Findings suggest that CARTER model is a multi-dimensional variable containing six different dimensions in which Islamic bank's customer emphasize on compliance dimension. These dimensions are; Compliance, Assurance, Reliability, Tangibility, Empathy and Responsiveness.

**SQ: 10 Customer expectations and perceived service quality by Ehigie (2006)**

In the attempt to examine how customer expectation, perceived service quality and satisfaction predict loyalty among bank customers in Nigeria, measurement scales were developed to measure the variables of the study using qualitative technique to explore customers' expectations from bank services. The measures of bank customers' expectation in Nigeria were found to be: bank workers' possession of required skill, bank workers possession of knowledge and experience, continuity of service to customer in future years, understand customers' needs, offering of fast and efficient service, providing physical safety to customer, confidentiality of transactions, positive attitude of staff to customer services, trustworthiness of bank, bank's good reputation, staff friendliness, keeping people informed, listening to customers, introduction of Saturday banking, extended banking closing hours, and insurance cover for customers.

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### **SQ11: The BSQ Model by Bahia & Nantel (2000)**

The instruments available for measuring service quality include either scale contextually developed by specific banks to cope with occasional problems or instruments not particularly designed for banking service but rather to measure the perceived service quality across a broad spectrum of services. Consequently, Bahia & Nantel (2000) developed a specific new scale for perceived service quality in retail banking: BSQ (Bank Service Quality). This BSQ model incorporated additional items such as courtesy and access, as proposed by Carman (1990), and items representing the marketing mix of the “7Ps” (product/service, place, process, participants, physical surroundings, price and promotion) from the Boom & Bitner (1981) framework. After refinement, the BSQ was left with 31 items of service quality relevant to the banking sector. These 31 items were distributed across six dimensions: Effectiveness and assurance, Access, Price, Tangibles Service portfolio and Reliability.

#### *2.1.3. Customer Satisfaction*

Customer satisfaction is considered as one of the most important and vital factors for long-time period business success. Nowadays, the main determinant factor for continuing business activities and maintaining the competitive edge is gained by paying a due attention to customers' and what they basically need. Ardakani, (2015). Customer satisfaction is also a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance or outcome in relation to his or her expectations (Musiime and Biyaki, 2010). Satisfaction became a popular issue in marketing during 1980s and is a doubtful topic for the period of both business expansions and recessions. Most thoughts on customer satisfaction entail customer expectation of the service provision, actual delivery of the customer expectation and experience that are

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either unmet or exceeded (Saleem, H. and Raja, N.S., 2014). The most widely accepted customer satisfaction concept is the expectancy disconfirmation theory which proposed that satisfaction level is a result of the difference between expected and perceived performance (Barsky, 1992). If customer's expectations exceeded the perception, positive disconfirmation occurred, while a negative disconfirmation occurred due to customers experience being poorer than expected, the key to sustainable competitive advantage lies in delivering high quality service that will in turn result in satisfied customers. (Akram, A., 2009).

#### *2.1.4. Electronic Payment*

Electronic payment systems, as a premeditated information system, are regarded as one of the key mechanisms of economic development, most especially, in developing countries, and they help immensely to strengthen the provision and capabilities of financial services (Akbarian and Vakili, 2011). E-payment systems can be categorized into three extensive classes: traditional monetary transactions, digital money, and credit debt payment. These payment systems have many requirements, such as security, acceptance, convenience, cost, control, tracking capability, and encryption control. E-payment is a means of financial exchange that is carried out between a buyer and a seller and this financial exchange is facilitated by electronic communication. In other perspective, e-payment is a payment service that utilizes information and communication technologies, as well as remote communication networks to perform a certain purchase transaction. (Moertini et al, 2011). Havinga, Smit and Helme (1996).

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### *2.1.5. Electronic Banking*

The definition of e-banking differs amongst researchers comparatively because electronic banking refers to the various types of services through which bank customers can request for information and perform most retail banking service via computer, television or mobile phone (Sathye, 1999). Burr (1996), for instance, described it as an electronic connection between bank and clients in order to prepare manage and control financial transactions. Timothy (2012), electronic banking is the application of the Internet as a remote supply channel for providing services, such as opening a deposit account, transferring funds among different accounts and electronic bills presentment and payment. On the other hand, Basel Committee (2003), defined e-banking as the provision of retail and small value banking products and services through electronic channels. Thus, e-banking consists of Internet banking, POS, telephone banking, PC banking, mobile banking, and ATMs as well as e-commerce. The very reason to the adoption of these various electronic channels is to improve the operational activities of banks and to ease way of doing business for all stakeholders involved thereby increase customer satisfaction.

### *2.1.6. E-Service Quality and Customer Satisfaction*

Customer satisfaction depends on the expectations and a perception about the offered services. Satisfaction has a deep connection with service quality. Moreover, the satisfaction of customers with electronic services is often based on the associated benefits attached to the product. It is therefore imperative for banks to make customer's perception about the quality of E-banking services' their concern, that way; it is remotely easier for the customer to evaluate the benefits of rival services provided electronically (Santos, 2003).

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Gaining the trust of customers on electronic channels is the vital factor for the success of electronic banking. Rapid delivery of innovations can be made possible by providing improved infrastructural services (Stewart, 1999). Liebana, Mufioz, and Rejon (2013) in their study pointed that accessibility, ease of use; trust and usefulness have significant effect on customer satisfaction in the context of e-banking services. In assessing electronic banking users' satisfaction, an important feature to be considered is e-services user-friendliness as well as positive word of mouth. Convenience and accessibility are identified as the most important factors in improving performance of e-banking (Kaur&Kiran, 2015).

#### *2.1.7 Point of Sale (POS)*

The purpose of earlier inventors of cash register was to create a platform that would be used for recording cash based transactions to prevent employee from tampering with the profit of the organization. This cash register device soon became a tool for processing financial transactions as it issues receipts functioning like sales as well as keeping the records and the reports generated from it. Improvements of technology over the years gave rise to what is today refers to as point of sale (POS). Ming(2019).

POS as defined by some notable researchers is that, such as Ming (2019), POS is a device deployed in a merchant locations where users swipes their electronic cards in order to make payment for purchases or services as against the use of cash. With the rapid growth of information and communication technology, electronic banking has played a central role in the field of electronic payments.

The customer having payment cards presents a debit, credit or prepaid cards, provided by their issuer bank, to the store clerks who then insert it into a computer terminal connected to the

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financial firm's computer system. The customer's account is then charged for the purchase and funds are automatically transferred to the store's deposit account.

Gilaninia, Fattahi and Mousavian (2011) defined POS as a device that is installed in the center of the sale of goods and services, and instead of paying cash by physical transference of money, the purchase amount deducted from an account holder i.e. customer are charged electronically using an electronic card, while the card acceptor (seller) is paid. Rose and Hudgins (2008), stated that, current Point of sale's networks divided between online and offline POS systems. The offline accumulates all of the customer's transaction until day's end and then the total of all transactions is subtracted from the customer's account. In contrast, the system automatically deducts each purchase from the customer's account as that purchase is made. According to the study, customers and financial firms would generally prefer offline POS system to online system. However, online system appears to reduce the frequency of customer overdrafts and, thus may be less costly in the long run.

Adeoti et al (2012) described a POS machine as a terminal, a device that allows a merchant to accept payments by means of cards from customers. It works almost like an ATM machine except that in this case, the machine is designed to accept payments only on behalf of the merchant which is mostly the registered company which has an account with a bank. Similarly in the work of Krawetz (2007), Point-of-Sale (POS) system is comprised of components that perform credit card transactions. The following were identified as the main components of POS:

- Different menus including administrator, support, cashier and supervisor menu.
- **A magnetic Card reader** - a device for reading credit cards by swiping the card on the slot. It is most distinguishable by the magnetic strip reader (MSR),

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- **A smart card reader** – a device for reading credit cards by inserting the card on the slot of the POS device.
  - **Five types of numeric keypads;**
    - A 12 key, telephone-style keypad,
    - A Four ATM-style function keys, labeled F1 to F4, to the right of the LCD screen.
    - Three color-coded function keys used as (Cancel, Backspace/Clear and Enter).
    - Four unlabeled, programmable function keys.
    - An Alpha key centered at the top of the keypad for character outputting.
  - A terminal display, backlit LCD screen, serves as the central location.
  - A blue indicator LED indicates power is ON.
  - An internal thermal printer.
  - **Transaction unit** sends the card information to an authenticating source (e.g. Visa) and receives a transaction authorization number. This shows that, the card reader and transaction unit are integrated into an embedded device.

### *2.1.8 How does POS Payment Platform Works?*

At any store where such mode of payment is entertained, as soon as the POS machine is activated, a buyer is able to use his ATM or acceptable payment card to make the payment using Personal Identification Number (PIN). Then after, the merchant's bank account gets credited and notification will be sent to both party (buyer and seller) while the whole payment process completed. The machine has its own power source with a battery that needs to be charged before use. The machine works almost like a phone, uses a special SIM Card from any of the supporting networks like Ethio-Telecom in Ethiopia for connectivity but the ultimate payment process is

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made possible by interbank transfer systems such as card banking switch owned by each bank solely or through national switch like Eth-switch or Ethio-pay.

### **How does one really operate POS?**

- The POS machine should be fully charged before the business of the day.
- Power it on by pressing the button until one hear a beep.
- When asked, enter the password which could be some letters such as 1234.
- If there is a proper connection, it should connect and ready to accept payments.
- A buyer presents his/her debit card and confirms by pressing ‘enter’.
- The merchant then forwards it for processing.
- If the transaction is successful, the merchant gets credited and two receipts are printed.
- Cut out the customer’s copy and give to him/her while cutting out the merchant’s copy for the record.
- One could also sign up with the bank for SMS notifications so the merchant get an alert message for every payment made into the account associated with the POS terminals.

## **2.2. Empirical Literature Review**

### *2.2.1. Empirical Review at International Level*

At international experience, a very few studies have been done on the POS service quality while several studies have been conducted on the service quality of conventional banking and e-banking services and their impact on customer satisfaction. Thus, the researcher has reviewed some of the studies and has presented as follows;

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A study conducted in Iran on customer satisfaction of e-service quality of Point of Sale (POS), by Mohammed Shaker (2015), shows that improving service quality in the time of problem occurrence, POS system service supporting company must resolve the problem as quickly as possible and provide merchants with suitable guidelines to use the system correctly. Moreover, the study implies that, advertising about the POS services being provided improves the provided service responsiveness. Offering fast services, increasing the speed of service offering and also on time and suitable responsiveness to customer by using electronic mail, holidays publicizing etc... through SMS to customers are other strategies which will improve the offered services.

According to the study conducted by Onyeiwu, Charles(2019), the impact of electronic banking service quality on customer satisfaction, the study has demonstrated that, banks are advised to improve on their e-banking products relentlessly, upgrade their channels (such as ATM, MPOS and POS) and enhance their (software application, e-mobile application). Secondly, the study suggested, the management of Nigerian banks should put in more resources in staff training and development; doing so will help in bringing service quality and timely service delivery. Furthermore, the study emphasized, in order to eliminate challenges that customers' face in the usage of e-banking products, banks are advised to ensure stable power supply, ensure 24/7 network service availability, improve more on the security of customer's transactions and personal data and create a platform whereby customers and bank management can interface to discuss on the new challenges that customers are facing and chart a new course of action so as to stimulate and ensure customers' satisfaction.

By Idowu & Fadiya (2015) have also conducted study of automated teller machine service quality on customer satisfaction. The purpose of this paper was to measure customer satisfaction as regards to e-banking services. The findings revealed that, necessary input to the bank

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management to increase customers' satisfaction should be in place through improving e-banking service quality.

The study further recommended that the focus should not be on e-banking service quality dimensions only. This aspect should be bundled and combined with other aspects of the service quality of banks for satisfaction of customers. They concluded that among the e-banking service quality dimensions, reliability, responsiveness, and empathy are the most important factors to increase the satisfaction level. Whereas in measuring the customer satisfaction as regards to e-banking services, assurance dimension appears insignificant in comparison to other dimensions.

in his thesis work, Al-Hawary et al., (2011), studied the Banking service quality provided by banks and its impact on their customer satisfaction, applying the five dimensions of SERVQUAL (tangibility, reliability, responsiveness, assurance and empathy), he scrutinized that, among the five variables, four service quality dimensions (tangibility, reliability, assurance, and responsiveness) have a positive and significant effect on customer satisfaction while 'Empathy' has a negative and significant effect on customer satisfaction.

ViririPiason (2013) together with his colleagues studied 'Significance of Service Quality and Customer Satisfaction in Zimbabwe's Banking Sector'. The result of his study indicated that, among the five SERVEQUAL dimensions, the banks in the study were found to be superior in providing appealing service environment (Tangibility). As a result, the banks under the study were found good in tangibility, reliability and assurance dimensions while the banks performed poorly in the responsiveness and empathy indicating inferior performance of banks in those dimensions of service quality.

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According to the analysis conducted by Tuan ( 2014) , in his study of the ‘Banking Service Quality in Vietnam’ among the six banking service quality dimensions, his result shows that effective & assurance play the most important role while service portfolio plays the least important role in customers’ and also bank staff’s perceiving banking service quality.

The study of Simon and Thomas (2016),In relation to point of sale system indicated that, effectiveness of point of sale system affects customer satisfaction to a great extent. Whereas, Usefulness, reliability and speed of point of sale system had moderate effect on customer satisfaction while purchase of any good from supermarket using point of sale had the least effect on customer satisfaction.

### *2.2.2 Empirical Review at National Level*

Simon (2016) has studied E-banking Service Quality and its impact on customer satisfaction in state owned banks in East Gojam Zone; Ethiopia. The finding of the study indicated that customers of the bank were satisfied by only four service quality dimensions (tangibility, reliability, responsiveness and empathy).The finding of the study also implied that, customers were most satisfied with the responsiveness dimensions of the service quality. On the other hand, customers were dissatisfied with the assurance dimensions of service quality. Furthermore, the study result shows that, unlike assurance, the four service quality dimensions (tangibility, responsiveness, empathy and reliability) were positively and significantly related with that of customer satisfaction.

Betelhem (2018) studied the E-banking Services and performance of TOP Performer of the commercial Banks in Ethiopia. The finding of the study reveals that, the regression result shows a significantly negative relationship between ATMs terminals and ROA. The study also

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disclosed that number of POS has negative impact on ROA of commercial banks in Ethiopia. The negative impact may have arisen from the high cost on e-banking services, Low level of internet penetration, frequent power interruption and low computer illiteracy rate.

The study of Tizazu (2012) studied ‘the effect of customer service quality on customer satisfaction in selected private banks in Addis Ababa’. The findings of this study indicated that, apart from responsiveness, the four service quality dimensions (tangibility, assurance, empathy and reliability) have positive and significant relationship with customer satisfaction. The result of this study also indicated that customers were most satisfied with the assurance dimensions of service quality. On the contrary, customers were less satisfied with reliability and empathy dimensions of service quality.

In other study conducted by AsratArega (2017), the finding reveals that service quality dimensions (Reliability, Responsiveness, Security, Empathy, and Tangibility) has a significant impact on customer’s satisfaction of the bank under the study. The major finding of the study shows that all the service quality determinants are positively correlated to the customer satisfaction. And recommended the bank to develop a policy package which helps to improve it the online banking service quality thereby ascertains its customers’ satisfaction.

SintayehuYitbarek (2015), in his studies conducted on ‘the impact of e-banking services on customer satisfaction’ revealed that reliability, transaction efficiency and ease of use dimensions of service qualities have a positive relationship with customer satisfaction. While Fikreselassie (2017), in his study on ‘the effect of e-banking service quality on customer satisfaction in the banking sector of Ethiopia’ revealed that service quality and security/ privacy are the major factors that strongly lead to customer satisfaction of the e-banking customers. It has been further

concluded that reliability, Ease of use, time of deliver and Access are the four dimensions which have insignificant impact on the customer satisfaction. Hence, in order to reap benefits, the study recommended that, the banks should provide the best possible facilities to e-banking users.

Even if some studies were conducted in international and domestic scenario regarding e-banking services, none of these researchers addressed the service quality of the POS and its effect on Customers satisfaction. Accordingly, the researcher assumed this would make the study to contribute to the knowledge and fill the gap in the area.

### 2.3. Conceptual Framework

Based on the literature review, Bahia & Nantel (2000)'s six dimensions, were conceptualized as the proposed framework for measuring quality of services of POS. According to this framework, bank service quality dimension directly affects customers' satisfaction on service quality components. The study examines these six BSQ Dimensions on customers' satisfaction based on the framework, it can be hypothesized that:

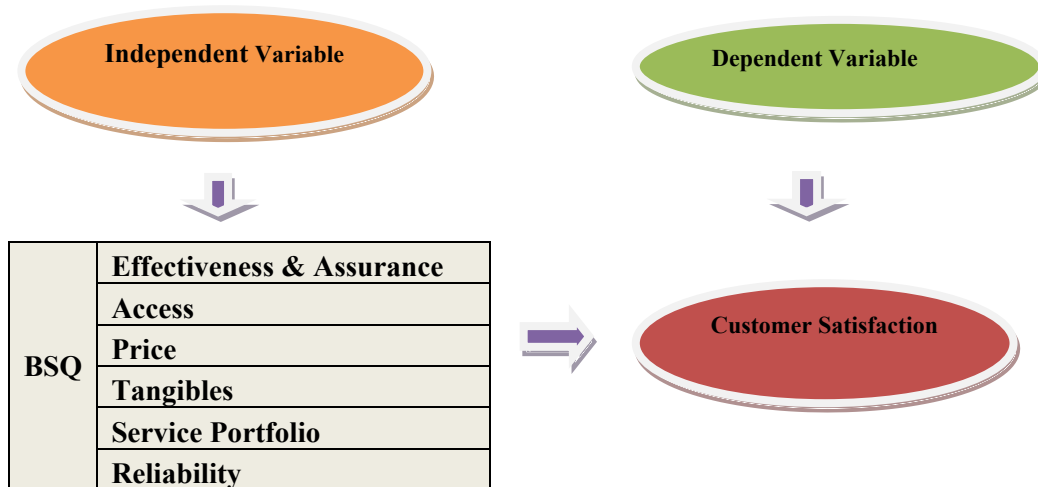


Figure 1. BSQ Conceptual Model framework

Source: Bahia & Nantel (2000)

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## 2.4. Research Hypothesis

In relation to the conceptual framework developed, the researcher has established the relationships among the independent and dependent variables. Accordingly, to solve the problem, the researcher has developed 6 specific hypotheses for this study that are listed as follows;

H1: Effectiveness and Assurance of the POS service have a positive and significant effect on Customers' satisfaction.

H2: Accessibility of the POS service has a positive and significant effect on Customers' satisfaction.

H3: Pricing of the POS service has a positive and significant effect on Customers' satisfaction.

H4: Tangibility of the POS service has a positive and significant effect on Customers' satisfaction.

H5: Service Portfolio of the POS service has a positive and significant effect on Customers' satisfaction.

H6: Reliability of the POS service has a positive and significant effect on Customers' satisfaction.

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## CHAPTER THREE

### 3. Research Methodology

#### 3.1. Introduction

In this chapter a research methodology and data collection instrument to be employed in the research process was discussed in detail. It included; area of the study, the research approach, research design, population and sampling, sources of data, method of data collection, data analysis methods, validity and reliability, and ethical issues were addressed.

#### 3.2. Study Area

This research is limited to Commercial Bank of Ethiopia where the population is merchants located in Addis Ababa providing POS service offered by the bank. Thus, the research would be conducted on Commercial Bank of Ethiopia's merchants acquiring POS machine so as to detect the effect of service quality of the POS services on customers' satisfaction.

#### 3.3. Research Approach

This study is quantitative since the researcher collected quantitative data on the service quality measurement dimensions by using questionnaires developed based on the Bahia & Nantel (2000) model. The model offers six dimensions to measure POS service quality. These six dimensions are the independent variables which are effectiveness and assurance, accessibility, price, tangibility, service portfolio and Reliability. The effect of the independent variables on the dependent variable i.e., customer satisfaction was being measured by this study.

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### **3.4. Research Design**

Explanatory research design was used as the main aim of explanatory research is to identify any causal links between the factors or variables that pertain to the research problem. Hence, the study used explanatory research so that the researcher could characterize the hypotheses that specified the nature and direction of the relationships between or among variables and can explain the relationship between the dependent and independent variables and attempt to connect variables to recognize the cause and effect.

### **3.5. Population, Sampling and Sampling Techniques**

#### *3.5.1 Target Population*

Population is the entire group of people, events or things of interest that the researcher wishes to investigate (Sekaran 2011). The target population is the total collection of elements about which the researcher wishes to make some inferences (Okiro & Ndungu, 2013). Thus, the target populations for this study were 749 merchants of commercial banks of Ethiopia that are found in Addis Ababa who are using POS services for their business purposes.

#### *3.5.2. Sample Size Determination*

A sample size determination is meant to address the basic issues known as how many elements of population are there and how they are chosen? A sample is a subset of a population element. And, Representative of Commercial bank of Ethiopia POS user merchant of the selected business sector and expected to be large enough to allow precision and to generalize the research finding.

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The sample size for the study was determined using the formula developed by Taro Yamane (1967).

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

Where, n - is the sample size

N - is the population size,

e - is the level of precision or sampling error = (0.05)

$$n = \frac{749}{1+749(0.05)^2} = 260.74$$

Therefore, the sample size selected from the population of 749 merchants was 261 customers. For this study, simple random sampling was used in order to get unbiased representation of the entire group or sector and to get accurate information within small margin error. After determining the number of sample customers from the total merchants in Addis, convenience sampling was used to collect the data from the sample respondents.

### **3.6. Method of Data Collection**

Primary data was collected in the course of close-ended structured questionnaire items through the adaptation and modification of instruments from previous studies in the area.

The structured questionnaire that contains questions about the dependent and independent variables was designed using both English and Amharic language.

For measuring the information obtained from the customers, Likert scale method was applied to the range of responses ranging from: (1-strongly disagree), (2-disagree), (3-Neutral), (4-Agree), and (5-strongly agree). Likert-scale is mostly used to ask many people the same questions and examining their answers to the research questions. Neuman (2003).

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### **3.7. Source of Data**

Both primary and secondary data was used on this study. Regarding the primary, it was directly collected from merchants who uses CBE's POS services using structured questionnaires prepared based on BSQ model. In addition, secondary data was collected from management information system (MIS) and Digital Business department of the bank.

### **3.8. Data Analysis Approach**

Data analysis is the way of analyzing the collected data depending up on the collected information and communicating the findings appropriately. After the questionnaires were collected, the researcher checked if there were unintended participants, who had filled the questionnaire distributed to the samples and had organized the returned questionnaire accordingly. Then after, the researcher performed the analysis process for the collected valid data using Statistical Package for Social Science (SPSS version 23). The descriptive statistics was also employed that includes frequencies, percentages, means and standard deviation. In addition, the inferential statistics (correlation analysis and regression analysis) was applied to test the developed hypothesis.

### **3.9. Measurement: Validity and Reliability**

*Validity* is the degree to which a test measures what it purports to measure. JW Creswell (2009). According to Cooper and Schindler (2003, p. 236), "a measure is reliable to the extent that it supplies consistent results. In so far, validity is concerned with two main issues: whether the instruments used for measurement are accurate and whether they are actually measuring what they are required to measure. Glyn Winter (2000). According to Jane Ritchie & Jane Lewis (2003), the validity of research is conceived as the precision or correctness of the research

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finding, and also checking the validity of data collecting instruments before applying to the actual study, so that the quality of the data will be assured beforehand. Accordingly, to ensure the validity of instruments, the instruments were developed under the close guidance of the advisor and also a pilot study was carried out on 5 respondents to pre-test the instrument in advance. Consequently, the pre-test result had provided an opportunity for the investigator to check the questionnaires and to minimize errors attributable to improper design elements such as question, wording or sequence. Adams (2007). After the dispatched questionnaires were returned, necessary modification on 5 items to unclear questions were done. Finally, the amended version of the questionnaires was dispatched to the targeted respondents of the study.

**Reliability** is known as to what extent the research findings can be replicated, if another study is undertaken using the same research methods. It is also asserted that “the reliability of the findings depends on the likely recurrence of the original data and the way they are interpreted” in other word (Stability, Equivalence, Homogeneity) of the data as well as how valid the results were and should produce similar generalized results if the sample size increases. Ritchie & Lewis (2003).

TW Dunn (2001) also defines reliability as a measure of stability or consistency across time. The data reliability test is measured using Cronbach’s alpha,  $\alpha$  (or coefficient alpha) which was developed by Lee Cronbach in 1951, intended to measure reliability, or internal consistency formulated as follows:

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$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N - 1) \cdot \bar{c}}$$

Where:

N = the number of items.

$\bar{c}$  = average covariance between item-pairs.

$\bar{v}$  = average variance.

The Alpha value ranges from a maximum of 1.0 for a perfect score to minimum of zero. A good measure of the alpha should be 0.70 or higher (W. Lawrence Neuman, 2007). According to Hair Jr. William Cand Barry (2010), scales exhibiting a coefficient alpha between 0.80 and 0.96 are considered to have a very good reliability, while a coefficient alpha that ranges between 0.70 and 0.80 are considered to have a good reliability, and alpha value ranges between 0.60 and 0.70 indicates for fair reliability. However, when the coefficient alpha is found to be below 0.60, the scale is considered to have a poor reliability. Therefore the variability of the study will be used in the analysis if their respective chronbach's alpha is greater or equal to 0.70.

**Table.1. Reliability Test (Cronbach's Alpha)**

**Reliability Statistics**

<b>Cronbach's Alpha</b>	<b>No of Items</b>
.893	7

**Item-Total Statistics**

<b>Variables</b>	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha</b>
Effectiveness & Assurance	19.8179	16.788	.708	.878
Accessibility	20.0380	16.052	.793	.868
Price	20.2459	14.913	.716	.874
Tangibility	19.8851	15.620	.761	.869
Service Portfolio	20.0416	15.242	.734	.872
Reliability	20.2719	13.721	.685	.888
Customer Satisfaction	19.7561	17.359	.577	.890

*Source: Analysis of Survey data 2020, using SPSS 23*

As can be seen in the table above, the Cronbach's Alpha value of the variables ranges between 0.878 to 0.890. Hence, all variables are acceptable for further analysis.

### **3.10 Ethical Considerations**

Participants of the study were assured about confidentiality of the information obtained in the course of the study by eliminating personal identifiers and analyzing the data in aggregates. Thus, respondents were not asked to write their name so as to make sure the confidentiality of the information they provided. Moreover, it was clearly stated in the questionnaire that the purpose of the research would be used for the academic purpose only.

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## **CHAPTER FOUR**

### **4. Data Analysis and Interpretation**

#### **4.1. Introduction**

In this chapter, the data collected from the respondents were analyzed and interpreted using quantitative analysis which involved analysis of the demographical information of respondents and inferential statistics employed to test and investigate the influence of independent variables on dependent variable. To analyze the collected data in line with the overall objective of the research undertaking, statistical procedures were carried out using SPSS (version 23).

The questionnaires were distributed for 261 number of sample respondents. Fortunately, 99% of the questionnaires were returned and thus, the analysis was made based on the responses acquired from such number of actual respondents. Therefore, the chapter focused on presentation of the results. The data was presented according to the leading questions. Both the quantitative and qualitative data was analyzed. At the end, discussions of the results were found.

#### **4.2. Response Rate on Questionnaire**

A total of 261 questionnaires were distributed to selected respondents who are merchants using POS terminals to assess 'The Effect of Point of sale (POS) Services Quality on Customer Satisfaction: Case of Commercial Bank of Ethiopia'. 260 questionnaires were filled up and returned, making the response rate 99 percent. This indicated that, the respondents under this study were more than willing and committed to provide the required information relevant to the research.

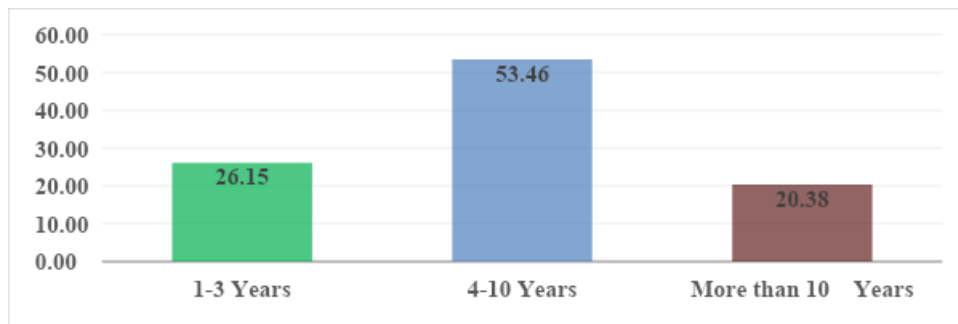
#### **4.3. Demographic Characteristics of Respondents**

This section provides a profile of respondents who were involved in the study and data collection. The primary data was collected from the merchants, using questionnaires, who render

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card payment services to their customers. Hence, this section described the relationship of the respondents that focused on tenure of the respondents being CBE customer, tenure of the customer acquiring CBE POS machine, the method of acquisition of the POS machine of CBE, the organizations having other Bank's POS deployed at their business site and preference of CBE POS relative to Other Bank's POS.

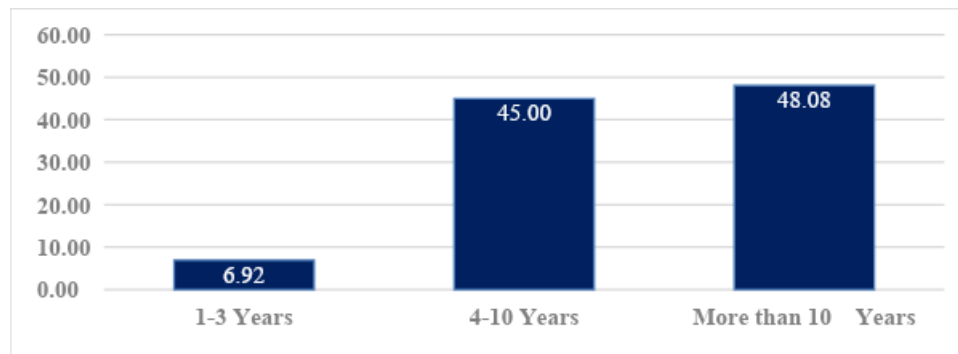
***Table2.Respondents' tenure of being a customer of CBE***



*Source: Analysis of Survey data 2020, using SPSS 23*

As clearly depicted in the table above, it can be inferred that around 53% of the respondents have been customers of CBE from 4-10 years, and 26% of the respondents claimed that they have been customers of the bank from 1- 3 years while the remaining respondents that are accounted for 20.38% have claimed that they have been a customer of CBE for more than 10 years.

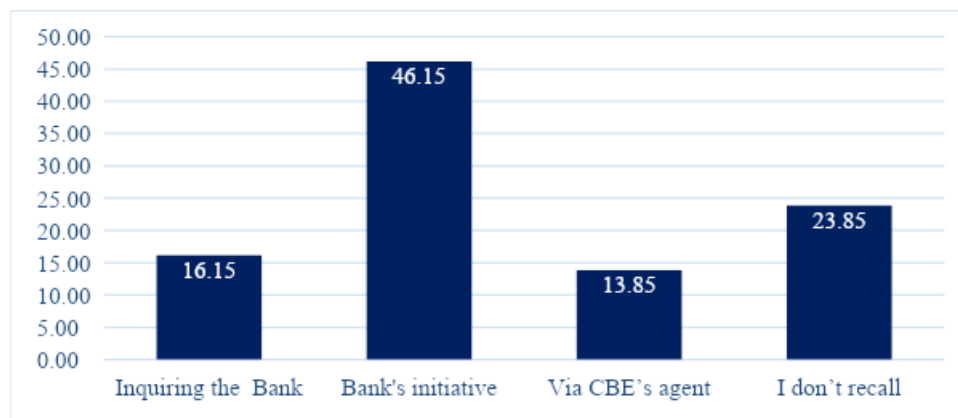
**Table 3. Tenure of the customer acquiring CBE POS machine**



Source: Analysis of Survey data 2020, using SPSS 23

As can be seen in the table above, related to the tenure of the customer acquiring CBE POS machine, customers who have a long tenure for more than 10 years' accounted for 48%, while the customers that have tenure between 4-10 years stood second next to the highest composition holding 45%. The remaining respondents that are accounted for nearly 7 % have claimed they it has been 1-3 years since they acquired the POS machine for their business site. The result further indicated that, businesses having a long tenure with the bank are the ones who have got the POS terminals in their site because of the bank itself took the initiative approaching them to deploy the POS in their business premises.

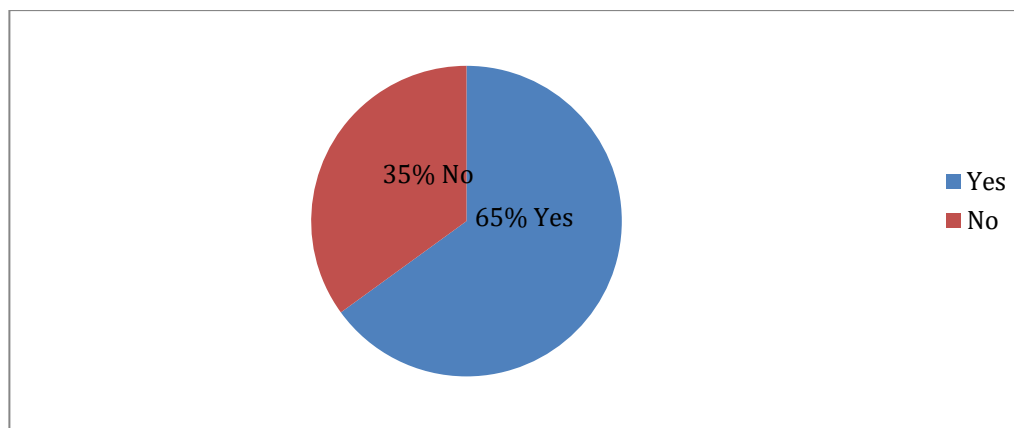
**Table 4. The Mode of acquisition of POS**



Source: Analysis of Survey data 2020, using SPSS 23

As it is indicated in the table above, for the question raised on how the respondents acquired the POS terminal at their business site, 46.15% of the respondents answered that the bank's initiative was the reason for the availability of the POS in their site while 23.85% of the respondents do not recall how they acquired the POS terminal. On the other hand, around 16% of the respondents stated that it was because of their own initiative they have a POS on their site while the least of the respondents accounted for 13.85% indicated that they got the POS at their business sites through agents' working on behalf of CBE. From this we can understand that, CBE's effort took the lions share in the deployment of the POS in various sites and it is an indicative that the bank need to intensify its effort in making the POS service accessible to customers using it is own resources.

**Table 5. Other Bank's POS deployed at your business site**



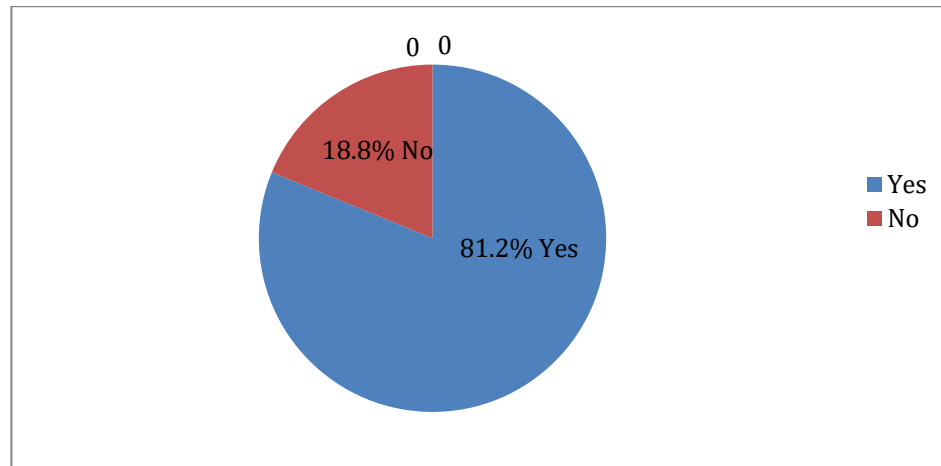
**Source:** Analysis of Survey data 2020, using SPSS 23

As it is clearly shown in the table above, concerning the question raised whether there is also other Bank's POS deployed at customer's business site, 65% of the respondents conform that they do have other bank's POS machines in their respective sites other than CBE's. Whereas, the remaining respondents accounted for 35% acknowledged that there is only CBE's POS operating

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in their business site. The result indicated that, most of the customers' of the merchants likely are either customers of other banks or not customer of CBE.

**Table6. Preference of CBE's POS relative to Other Bank's POS**



*Source: Analysis of Survey data 2020, using SPSS 23*

As it is depicted in the table above, with reference to the preference of CBE's POS relative to Other Bank's POS, most of the respondents' i.e. 81.2% ascertained that CBE's POS is more preferable to them than other bank's POS terminals. The result is a good indicator that the POS machine of CBE is user friendly and adds value to their customers as compared to the POS services rendered by other banks in Addis Ababa. On the other hand, the remaining respondents accounted for 18.8% conform that they prefer other bank's POS to that of CBE's.

#### 4.4. Descriptive Analysis

*Table 7. Descriptive Statistics*

**Descriptive Statistics**

Dimensions	N	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic
Effectiveness & Assurance	260	2.00	4.77	3.5322	.64076
Accessibility	260	1.60	4.60	3.3115	.68881
Price	260	1.00	4.80	3.1131	.92964
Tangibility	260	1.75	5.00	3.4529	.77605
Service Portfolio	260	1.00	5.00	3.3058	.85637
Reliability	260	1.00	5.00	3.1038	1.16695

The table above shows that the scores of means and standard deviations of the six variables of service quality. As can be seen in the table, the average sensitivity regarding the selected variables had a mean score ranges between 3.53 and 3.10 and a standard deviation ranging from 0.64 and 1.16. This indicated that, the variation from the mean does have significant variation which proves the bank service quality of dimensions has been measured in terms of the range of Likert scale as expressed below;

- ⇒ Mean scores with 2 and less values, indicated a ‘disagree’ with the captioned statement in questionnaire.
- ⇒ Mean scores with greater than 2 and less than 3 values indicated a ‘Neutral’ position for the question raised in the questionnaire.
- ⇒ Mean scores with greater than 3 values indicated that the respondents agreed with the statement captioned in the questionnaire.

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As stated in the table 7, the first variable with the highest mean value is Effectiveness & Assurance with a mean score of 3.53 followed by tangibility and accessibility each accounted for a mean score of 3.45 and 3.31 respectively. The minimum mean score was recorded by reliability with the score value of 3.10. From this, one can understand that, the fact that the bank is good at effectiveness and assurance is the main reason the merchants patronize the POS services of the bank. It further indicated that the merchants under the study are satisfied with the support personnel's of the bank and ascertains that the personnel's are knowledgeable about the POS's services and have the greatest ability to render the required service appropriately.

The secondly ranked variable is tangibility, indicating that the physical evidence of the bank's POS is maintained in a way that attract customers and the required signage to indicate the availability of the POS service are placed in a visible area where they can easily be seen by the respective customers of the merchants.

The least bank service quality dimension with low mean score of 3.10 is reliability and this indicated that the bank's POS service might have encountered a frequent transaction errors and the filing system of the POS might also be found poor in the experience of its respective merchants.

Regarding the standard deviation, as can be seen in the table above, the customers using POS of CBE indicated that, they are barely satisfied as indicated from the score of mean with all the bank service quality dimensions except for the reliability which exhibited the highest standard deviation. The rest of the dimensions fall between positive and neutral response indicating that CBE should exert its maximum effort so as to keep its customers satisfied using POS machines.

#### 4.5. Correlation Analysis

To further determine the existence and level of association between independent and dependent variables, the researcher used partial correlation from which Pearson correlation coefficient is considered.

*Table 8 Correlation analysis*

		Correlations						
		EA	AC	PR	TA	SP	RE	CS
EA	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	260						
AC	Pearson Correlation	.758**	1					
	Sig. (2-tailed)	.000						
	N	260	260					
PR	Pearson Correlation	.525**	.640**	1				
	Sig. (2-tailed)	.000	.000					
	N	260	260	260				
TA	Pearson Correlation	.570**	.700**	.600**	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	260	260	260	260			
SP	Pearson Correlation	.548**	.616**	.597**	.715**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	260	260	260	260	260		
RE	Pearson Correlation	.497**	.572**	.578**	.588**	.588**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000		
	N	260	260	260	260	260	260	
CS	Pearson Correlation	.593**	.524**	.499**	.383**	.418**	.454**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	254	254	254	254	254	254	254

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Analysis of Survey data 2020, using SPSS 23

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The result in the above table 7 indicated that, the bank service quality dimensions under the study were strongly related with customer satisfaction. The correlation between the independent dimensions indicated, accessibility and effectiveness & assurance has a coefficient of 0.758 followed by service portfolio and tangibility with a coefficient value of 0.715. The least correlation that occurred on the independent dimensions was between reliability and effectiveness & assurance with a coefficient value of 0.497.

The correlation between dependent and independent dimensions indicated that all dimensions are significantly correlated with customer satisfaction in the usage of POS services of CBE. Nevertheless, the highest correlation, among the independent and dependent variables was exhibited between Effectiveness & Assurance and Customer Satisfaction with the coefficient value of .593 followed by accessibility (.524), and with that of price (.499), indicating that the bank performed better towards both dimensions and resulted in customer satisfaction.

On the contrary, tangibility has exhibited the least degree of association with customer satisfaction indicating that the bank performed poorly towards physical evidence of the service, appearance of the support personnel's as well as other physical representation of the service such as the POS terminals, the credit cards etc.

#### **4.6. Test Results for the Classical Linear regression Model Assumptions**

The research questions for the multiple linear regressions are: Can we explain the outcome variable, export performance with the given independent variables customer orientation, technology orientation, exploratory innovation and exploitive innovation.

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#### 4.6.1. Determining how the Model Fits

The first table of interest is the model summary (Table 8). This table provides the R, R<sup>2</sup>, adjusted R<sup>2</sup>, and the standard error of the estimate, which can be used to determine how well a regression model fits the data:

**Table 9 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.649 <sup>a</sup>	.421	.407	.506

a. Predictors: (Constant), RE, EA, PR, SP, TA, AC

b. Dependent Variable: CS

*Source: Analysis of Survey data 2020, using SPSS 23*

As indicated in the table 9 above, the regression model presents how much of the variance in CS is explained by the underlying factors. The model or the predictor variables have accounted for 40.7% of the variability. This means 40.7% of variations in CS in the use of POS in CBE were explained by the independent variables included in the model. However, the remaining 59.3% changes in CS in the use of POS of CBE were caused by other factors that were not included in the model.

#### 4.6.2. Statistical Significance of the Model

The F-ratio in the ANOVA (Table 10), tests whether the overall regression model is a good fit for the data. The table shows that the independent variables statistically significantly predicted the dependent variable,  $F(6,247) = 29.977$ ,  $p(.000) < .05$  (i.e., the regression model is a good fit of the data).

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*Table 10. ANOVA*

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.132	6	7.689	29.977	.000 <sup>b</sup>
	Residual	63.351	247	.256		
	Total	109.483	253			

a. Dependent Variable: CS

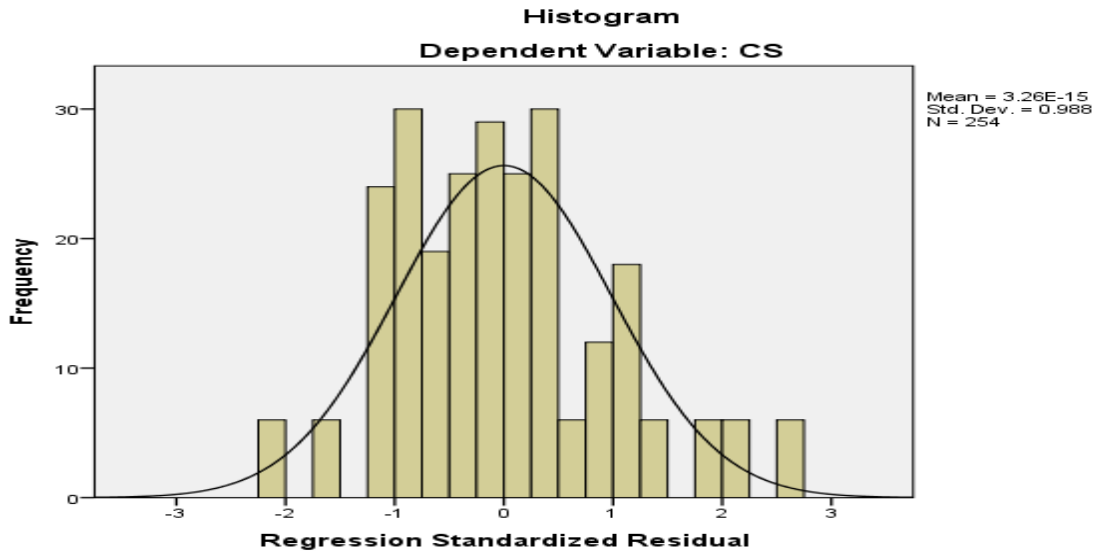
b. Predictors: (Constant), RE, EA, PR, SP, TA, AC

*Source: Analysis of Survey data 2020, using SPSS 23*

#### 4.6.3. Normality

There are two ways normality can be tested using figure which needs a subjective interpretation of the figure while the descriptive has a common standard that actually measures using descriptive statistics. Hence, a common rule of thumb test for normality is to get skewness and kurtosis within range of +2 to -2 when data is normally distributed (Hair et al). Thus, normality analysis for the 6 variables was conducted. As the graph below shows, all variables are within +2 to -2 ranges. That means the data is normally distributed.

**Figure 1** Normality test result using histogram



*Source: Analysis of Survey data 2020, using SPSS 23*

As depicted in the figure above, some standard residuals are a little bit far away from the curve, while many of the residuals are fairly close more to the curve and the histogram is bell shaped. This shape fundamentally indicated that the majority of scores lie around the center of the distribution so the largest bars on the histogram are all around the central value. Consequently, this indicated that the residuals or (disturbance or errors) are normally distributed.

To get strong assurance of the residual or errors are normally distributed, in addition to the above test for normality, normality distribution is detected based on skewness and kurtosis statistics. Skewness is a measure on the asymmetry of a distribution. While, kurtosis measures the extent to which observations cluster around a central point.

**Table 11 Normality of Distribution Using Descriptive Statistics**

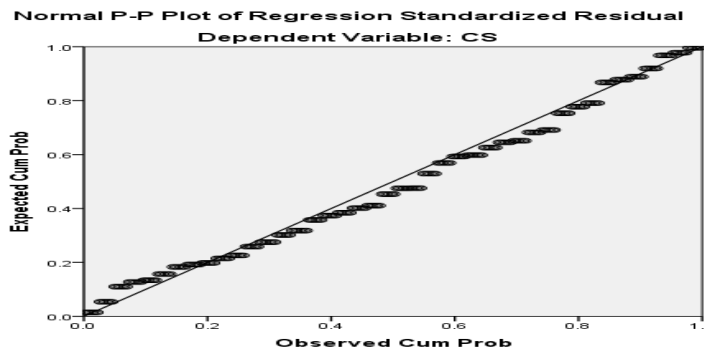
Dimensions	Statistics	Mean	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
<b>Effectiveness &amp; Assurance</b>	260	3.5322	-.108	.151	-.020	.301
<b>Accessibility</b>	260	3.3115	.040	.151	.115	.301
<b>Price</b>	260	3.1131	-.117	.151	-.789	.301
<b>Tangibility</b>	260	3.4529	-.122	.151	-.430	.301
<b>Service portfolio</b>	260	3.3058	-.189	.151	.112	.301
<b>Reliability</b>	260	3.1038	.048	.151	-1.055	.301

Thus, according to the above diagnosis information presented in all the tests, there are no significant normality problems that violate the assumptions of the multiple regressions.

*4.6.4. Linearity Test*

Linearity refers to the degree to which the change in the dependent variable is related to the change in the independent variables. To determine whether the relationship between the dependent variable, customer satisfaction, on POS machine services and the independent variables i.e. Effectiveness & Assurance, Access, Price, Tangibility, Service Portfolio and Reliability, is linear; plots of the regression residuals through SPSS software had been used.

Figure 2 Normal point plot of standardized residual



Source: Analysis of Survey data 2020, using SPSS 23

The P-P plot of residuals reveals no large deviation in the spread of the residuals from left to right on the figure and it is almost all residuals lay on the linear straight line therefore this tells us the relationship between the predictor variables and the dependent variable is linear.

#### 4.6.5. Multicollinearity

According to Brooks (2008), multicollinearity will occur if some or all of the independent variables are highly correlated with one another. It shows the regression model has difficulty in explaining which independent variables are affecting the dependent variable. If multicollinearity problem is too serious in a model, either additional important variable should be added or unimportant independent variable should be dropped. This study uses high pair-wise correlation coefficients method to detect the existence of multicollinearity high pair-wise correlation coefficients method and to see the correlation of independent variables between each other. According to Joseph and Rosemary (2003), if the correlation coefficient is higher than 0.8, it is considered as the model consists of serious multicollinearity problem.

**Table 12. Multicolilnearity**

Model		Correlations			Collinearity Statistics	
		Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)					
	Effective & Assurance	.593	.339	.274	.416	2.406
	Accessibility	.524	.042	.032	.293	3.415
	Price	.499	.205	.160	.492	2.032
	Tangibility	.383	-.127	-.098	.354	2.821
	Service portfolio	.418	.032	.024	.415	2.409
	Reliability	.454	.151	.116	.532	1.881
a. Dependent Variable: CS						

Source: Analysis of Survey data 2020, using SPSS 23

The information in the (Table 12) above also allows us to check for multicollinearity. A common rule of thumb: for any predictor  $VIF > 10$  should be examined for possible multicollinearity problem (Dhakal, 2016). In our multiple linear regression models, VIF should be  $< 10$  (or Tolerance  $> 0.1$ ) for all variables, which they are. Thus, it can be concluded that all the variables in the study have low correlation power. As a result, there is no multicollinearity problem in the explanatory variables selected to variables on CS of POS in CBE.

#### 4.6.6. Autocorrelation

The other Assumption of classical linear regression model is Autocorrelation. The diagnostic test for CLRM assumption of no autocorrelation was tested by this study. According to Gujarati, (2004), the assumption of no autocorrelation between the disturbances assumes that, given any two X values,  $X_i$  and  $X_j$  ( $i \neq j$ ), the correlation between any two  $u_i$  and  $u_j$  ( $i \neq j$ ), is zero. According to Chris Brooks (2008), it is assumed that the errors are uncorrelated with one another. If the errors are not uncorrelated with one another, it would be stated that they are ‘auto correlated’ or that they are ‘serially correlated’. This assumption was tested by Durbin Watson (DW) test of autocorrelation. Durbin--Watson (DW) is a test for first order autocorrelation -- i.e. it tests for a relationship between an error and its immediate previous value.

**Table 13. Rejection, non-rejection, and inconclusive regions for DW test**

	reject H0: positive autocorrelation	inconclusive	Do not reject H0: no evidence of autocorrelation	Inconclusive	Reject H0: negative autocorrelation
0	$dLdU$	2	$4-dU$	$4-dL$	4

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**Table 14. DW test result test of autocorrelation**

<b>TEST</b>	<b>Durbin-Watson value</b>
DW result	1.704

*Source: Analysis of Survey data 2020, using SPSS 23*

The DW test statistic value for models was 2.210 for the total observations of 260 respondents that were used in the model with 6 regressors. The DW test statistics for the model is 1.704 lies between 4 dL and 4dU. The model is approximately near to 2 so; null hypothesis of no autocorrelation is within the inconclusive region. Therefore, there is no significance evidence for the existence of autocorrelation in the study.

#### **4.7 Discussion of the Inferential Statistics**

Since correlation analysis do not provide enough information to make a proper decision regarding the relationships between the variables, multiple regression has been used to test the hypothesis for the independent and dependent variables. This section discussed in detail the analysis of the results for each independent variable and their significance in influencing employee's performance. Furthermore, the discussion analyzes the statistical findings of the study in relation to the previous empirical evidences. The result for each set of factors is discussed as follows;

**Table 15. Multiple regression results  
Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.	
	B		Beta			
1	(Constant)	1.487		8.003	.000	
	EA	.433	.426	5.669	.000	
	AC	.055	.085	.653	.514	
	PR	.160	.049	.227	3.295	.001
	TA	-.138	.068	-.164	-2.018	.045
	SP	.028	.057	.037	.496	.621
	RE	.090	.038	.159	2.395	.017

a. Dependent Variable: CS

*Source: Analysis of Survey data 2020, using SPSS 23*

#### 4.7.1 Effectiveness & Assurance

As it is indicated in table 15 above, a coefficient of Effectiveness & Assurance is 0.426 along with its p-value.000. It can be seen that, maintaining other explanatory variables constant, Effectiveness & Assurance was found to have a statistically significant positive association with Customer satisfaction. As a result, the researcher accepted the hypothesis that stated *effectiveness and assurance of the POS service have a positive and significant effect on Customers' satisfaction*. The study's finding is similar to previous works of ViririPiason (2013), Tuan (2014), and Meraf (2018) who stated that effectiveness & assurance plays the most important role in banking service and are also one of the elements that added value to the customers of the bank in using the E-banking channels under their respective study. The possible reason for the result is that the bank's POS terminal is effective in delivering its intended objective while the bank assured that its support personnel of the POS services are competent and reliable enough to enable merchant's process their transaction without any technical interruption. On the other

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hand, this study contradicts with the study of Simon (2016) stating that the assurance dimension of service quality has placed less emphasis on customer satisfaction.

#### 4.7.2 Access

As can be seen in the table 15 above, coefficient of access is .058 with its p-value .514. It can be inferred that, maintaining other explanatory variables constant, access was found to have insignificant and positive association with Customer Satisfaction. As a result, the researcher rejected the hypothesis that stated *Accessibility of the POS service has a positive and significant effect on Customers' satisfaction*. The possible justification for the result is that, the presence of adequate number of POS at merchant sites merely won't have a significant influence rather the deployed POS terminals must work to the expectation of the customer 24/7. Thus the bank needs to align its accessibility with the performance of the terminals and other significant features that can differentiate it from other competitive banks. *The result found to be contrary to the prior research done by Doreen (2018) that stated accessibility of E-banking Channels have significant association with customer satisfaction. On the other hand, this study confirmed the studies conducted by Tuan (2014) and Ababio (2016) whereby, the banks under the study failed to be approachable and create ease of contact as well as lacked convenient hours of operation, which resulted in customer dissatisfaction.*

#### 4.7.3 Price

As it is depicted in table 15 above, coefficient of Price is 0.227 with its p-value 0.001. It can be seen that, maintaining other explanatory variables constant, Price was found to have a significant and positive association with customer satisfaction. As a result, the researcher accepted the hypothesis that stated *'Price of the POS service has a positive and significant effect on Customers' satisfaction'*. The study's finding is similar to previous works of Tuan(2014)that

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stated an adequate explanation of the service fees, proper and periodical notification of terms and setting a reasonable fee are an important element for the customer to have a positive perception while associating price with customer satisfaction. Hence, the possible reason for the result is that the bank's POS service fee has similar fees with that of the ATM as well as the merchants at the site are at ease on the fairness as well as the charge of using POS machines of CBE.

#### *4.7.4 Tangibility*

As it is illustrated in the table 15 above, coefficient of Tangibility is -0.164 with its p-value 0.045. It can be seen that, maintaining other explanatory variables constant, tangibility was found to have a significant and negative association with Customer Satisfaction. As a result, the researcher rejected the hypothesis that stated *tangibility of the POS service has a positive and significant effect on Customers' satisfaction.*

The result of this study indicated, tangibility dimension has an adverse relationship with customer satisfaction. This implied that the POS terminals deployed at merchant premises are not decorated and branded with the necessary visible signage that cardholders barely know the availability of POS machine at merchant sites. The other likely reason is that the terminals level of cleanliness and neatness are questionable as most are stashing it next to the cashiers where the area is usually are not maintained with the required level of neatness as expected by customers. The POS statement accuracy could also be one of the dissatisfaction factors for customer satisfaction especially for the transactions that holds error and needs adjustment. These are the area where the bank needs to work in order to improve customer perception of service quality.

The study's finding differ from the previous works of Tizazu (2012), Viriri(2013) and Girum (2016) that stated Reliability dimension of service quality has a positive relationship with

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Customer Satisfaction indicating the physical evidence used on those banks under the study, created a positive appeal for the users in terms of the appearance, in neatness and useful visibility of e-channels devices. And similar with the study conducted by Tuan (2014) who stated that Tangibility considered as having minor implication both on customers and bank's staff under the study.

#### *4.7.5 Service Portfolio*

As it is clearly shown in the table 15 above, coefficient of Service Portfolio is 0.037 with its p-value 0.621. It can be seen that, maintaining other explanatory variables constant, service portfolio was found to have insignificant and positive association with Customer Satisfaction. As a result, the researcher rejected the hypothesis that stated *Service Portfolio of the POS service has a positive and significant effect on Customers' satisfaction*. This implies that, as the POS is basically new and emerging product, It only provides basic services with no other needs and requirements for complex and/or complicated financial services; and CBE have not yet well-considered and diversified the POS service portfolios based on merchant business needs and requirements.

Accordingly, the result of the study is found to be similar to prior research done by Viriri (2013), and Tuan (2014) whose studies revealed that service Portfolio of E-banking Channels plays less important role and the banks under the studies have got a limited range of services and consistency with latest technology in banking services thereby resulted in customer dissatisfaction.

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#### 4.7.6 Reliability

As can be seen in the table 15 above, the coefficient of Reliability is 1.59 with its p-value 0.17, it can be concluded that, maintaining other explanatory variables constant, Reliability was found to have a statistically significant positive association with Customer Satisfaction. As a result, the researcher accepted hypothesis that stated *Reliability of the POS service have a positive and significant effect on Customers' satisfaction*. The possible reason for the result was that the bank's POS service is reliable in delivering their intended service, being free from error and has reliable filing feature exactly as merchants needed it.

The study's finding confirms the result of previous studies of Virir (2013), Sintayehu (2015), Ababio (2016), and Yidnekachew (2019) that stated Reliability is one of the elements of service quality that adds value to the customers of the bank in using the E-banking channels under their respective study. Whereas, the findings of this study differs from the study conducted by Fikreselassie Asfaw (2017) in which the customers places less emphasis on the reliability of e-banking channels in general.

#### 4.8 Summary of Hypotheses Test

As can be shown in the table above, the result of regression and correlation, three variables i.e. Effectiveness and Assurance, Price and Reliability have high value of significance and support the stated hypothesis while Tangibility was found to be significant but had adverse indication with previously hypothesized sign. Finally, Service Portfolio and Accessibility were found to have insignificant effect on customer satisfaction and were rejected due to their insignificance.

**Table 16 Summary of hypotheses test**

No	Hypothesis	Index of Variable	Significance	Status
H1:	Effectiveness and Assurance of the POS service have a positive and significant effect on Customers' satisfaction.	EA	.000	Accepted
H2:	Accessibility of the POS service has a positive and significant effect on Customers' satisfaction.	AC	.514	Rejected
H3:	Pricing of the POS service has a positive and significant effect on Customers' satisfaction.	PR	.001	Accepted
H4:	Tangibility of the POS service has <i>a positive</i> and significant effect on Customers' satisfaction.	TA	.045	Rejected
H5:	Service Portfolio of the POS service has a positive and significant effect on Customers' satisfaction.	SP	.621	Rejected
H6:	Reliability of the POS service has a positive and significant effect on Customers' satisfaction.	RE	.017	Accepted

#### 4.9 Discussion of Results

Pearson correlation and regression test was applied to examine the relationship between POS service quality and customer satisfaction in Commercial Bank of Ethiopia. The study applied the Bahia and Nantel's Bank Service Quality (BSQ) model which comprised six variables in it. Out of the six dimensions, CBE was acknowledged in rendering excellent services in the dimensions of 'Effectiveness and Assurance' 'Reliability' and 'Price' respectively. The mean score value of the remaining three dimensions i.e. access, service portfolio and tangibility were found to be lower and the bank needs to improve on these areas in order to further increase its customer satisfaction.

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Furthermore, even if the finding result indicated that there is significant correlation among the six bank service quality dimensions and customer satisfaction, 'Effectiveness and Assurance', 'Price' and 'Reliability' had a supreme relationship with customer satisfaction at CBE.

Finally, the finding of the study found to be consistent with the findings of a certain studies conducted in this area. For instance, Tuan (2014) assessed in his study that all BSQ dimensions have a positive correlation with customer satisfaction. The study finding further ascertained the result of the study conducted by Al-Hawary et al., (2011) which stated that there is a significant and positive relationship with that of Assurance and Reliability dimensions of service quality. Whereas, the finding of this study differs from the studies conducted by SintayehuYitbarek (2015) that stated assurance and reliability dimensions of the service quality had insignificant effect on customer satisfaction.

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## CHAPTER FIVE

### 5. Summary, Conclusion and Recommendation

The main objective of the study was to examine the Effect of Point of Sale (POS) services Quality on Customer Satisfaction in the Case of CBE. Therefore, based on the analysis and interpretations made at the pervious chapter, the following summary, conclusions and recommendation are made.

#### 5.1 Summary of Findings

To achieve the objectives, six research questions were raised. They are summarized below:

- ✓ How do the **effectiveness and assurance** dimension of POS service affect the level of customer's satisfaction at CBE?
- ✓ How does the CBE's POS service **accessibility** affect customer satisfaction at CBE?
- ✓ To what extent the **price** dimension of the POS service affects customer satisfaction at CBE?
- ✓ How does the CBE's POS machine **tangibility** affect customer satisfaction at CBE?
- ✓ To what extent the **service portfolio** dimension of the POS service affect customer satisfaction at CBE?
- ✓ How does the **reliability** dimension of the POS machine affect customer satisfaction at CBE?

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A total of 261 questionnaires were distributed to sample population to examine ‘the Effect of Point of Sale (POS) Services Quality on Customer Satisfaction in the Case of CBE and 260 usable questionnaires were filled up and returned making the response rate 99% percent. This indicated that the respondents under this study were committed to give the information relevant to the research under the study.

Demographic questions were analyzed using figures and percentages. While, the research questions were analyzed using multiple regression and that are included (model specification, autocorrelation and multicollinearity). The demographic characteristics of the respondents that focused on respondents’ tenure of being a customer of CBE, tenure of the customer acquiring CBE POS machine, the mode of acquisition of POS, other Bank’s POS deployed at merchants business site and preference of CBE’s POS relative to Other Bank’s POS. The finding indicated more than half of the respondents have been customer of CBE from 4-10 years; the result is an indicative that the merchants are satisfied with their current service. The likelihood they are adopting a new product is very high resulting for them to adopt POS terminals of CBE. Regarding tenure of the customer acquiring CBE POS machine, customers who have a long tenure are the one who adopt the POS machine for their customers. Their tenure in the bank certainly plays its part in the adoption of the POS. Concerning the mode of acquisition of the POS; it is mostly the initiative of the bank that resulted in the adoption of POS in their business site. Related to the presence of other Bank’s POS deployed at merchants’ business site, majority of respondents conform they do have other bank’s POS machines in their respective sites. Lastly, preference of CBE’s POS relative to other Bank’s POS, most of respondents’ approved that CBE’s POS is more preferable than other bank’s POS. This is a good indicative that the POS of CBE are user friendly and adds value to their customers.

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The regression result confirmed that the coefficient of four of the independent variables have significant association with the customer satisfaction among which three of them confirmed the hypothesis. The rest two variables show insignificant association with the dependent variable of customer satisfaction. The first section of this paragraph deals with those variables that have significant association with customer satisfaction while the next paragraph deals with those variables that are insignificant relationship with dependent variable.

The first variable with high level of significance is Effectiveness & Assurance that has a coefficient of 0.426 with its p-value .000. The finding is an indicative that the bank's POS service is effective in delivering their intended objective as well as assures their customers/merchants that their employees in support of POS machines are competent and reliable to enable the merchants their transaction without interruption. Likewise, coefficient of Reliability is 0.159 with its p-value 0.17. The finding is an evident that beside the human capability, the bank has a reliable service delivery aid in the form of deploying better infrastructure intended to deliver free from error services and has reliable filing feature to the merchants. Similarly, coefficient of Price implied 0.227 with its p-value 0.001. The finding revealed that the customers and merchants at the site are at ease on the fairness as well as the charge of using POS machines of CBE. Contrary to the postulate, the coefficient of Tangibility is -0.164 with its p-value 0.045. The result indicated that, in terms of tangibility it has an adverse relationship with customer satisfaction, this implied that POS terminals are not decorated and branded with the necessary visible signage that customers of the merchants barely know the availability of the POS machine in their business premises. The other likely reason is that, the POS terminals level of cleanliness and neatness are questionable as most are stashing it next to the cashiers where the terminal station is usually are not maintained with neatness as the customers expected it. The POS statement

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accuracy could also be one of the reasons for the dissatisfaction of merchants especially for transaction that holds errors and needs immediate adjustment.

The variables that have insignificant association are access and service Portfolio. The coefficient of access is .058 with its p-value .514 indicated there is insufficient number of POS as demanded by the business companies, POS machine installed are not modern and latest one, the waiting time of the bank to get support concerning the POS issues is long, the bank has not assigned adequate number of support personnel to companies and call line queue at the contact center of the bank take long. Since the accessibility requires significant responsiveness, CBE failed to meet the required customer expectation. While, Service Portfolio is 0.037 with its p-value 0.621, the result is an evident of the fact that the range of service is limited.

## **5.2 Conclusion**

In this section, based on the regression analysis findings outlined in the chapter four, the conclusion is presented followed by some recommendations to provide insight in to the Effect of Point of Sale (POS) Services Quality on Customer Satisfaction in the Case of CBE.

Effectiveness & Assurance is one of the factors that influence customer satisfaction positively, the delivery of service by the POS to attain merchant's intended objective assures their customers who use the machine to make their purchase using card and the support employees from CBE persisted to be competent and reliable to enable the merchants transact with minimum or no interruption. The result also indicated that the respondents found the POS machines reliable to do their transaction and revealed the bank's ability to deliver a reliable service in the forms of deploying better infrastructure, system and policy that have enabled their intended

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target in delivering free from error transactions and has reliable filing feature that is essential to the merchants. The fees charged by the bank indexed Price in the regression indicated the respondents are at ease when it comes to the fairness of the fee charged by the POS services of CBE and also are well aware of the fees as it has similar charge with that of the ATM.

Tangibility of the POS is one of the obstacles to have a better customer satisfaction. It has an adverse relationship with customer service; this evidently showed the reality of terminals which do not pay attention to adequate decoration and branding in the POS payment areas along with required visible signage to customers of the merchants and failing to do that resulted in most of the time to overlook the availability of POS machine in the merchants premises. The level of cleanliness and neatness are another main factor that exhibited dissatisfaction as most POS of CBE are installed in the merchant's sites that are stashed next to the cashiers table and usually are not maintained with neatness as expected by customers. The POS statement accuracy is also one of the dissatisfaction reasons for customers especially for transaction that needs immediate adjustment.

The other main factor is accessibility of POS, which according to the respondents are insufficient in the number as demanded and required by the merchants, POS machine installed are not modern and latest one in terms of their software, the waiting time of the bank to get support concerning the POS issues is long, the bank has not assigned adequate number of support personnel to companies and call line queue at the contact center of the bank take long. Lastly, Service Portfolio result indicated that the range of services of the POS machine is limited as it has not significantly related with customer satisfaction.

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### 5.3 Recommendations

The purpose of the study was to examine the ‘Effect of Point of Sale (POS) services Quality on Customer Satisfaction of POS machines in the Case of CBE’. It is evident that any successful commercial bank desires higher level of satisfaction of the customers as it determines the level of their ultimate business success.

The selected merchants under the study revealed that ‘effectiveness and assurance’, price and reliability have the positive influence on customer satisfaction whereas, Tangibility has an adverse significant influence on customer satisfaction. Service portfolio and accessibility have insignificant association indicating the variables do not have significant influence on customer satisfaction. Based on the findings, the following recommendations, which are necessary for the betterment of customer satisfaction, are forwarded as follows:

- The effectiveness and assurance of the POS service has affected the level of customer’s satisfaction at CBE positively. The service rendered by CBE employees tasked with POS machines maintenance has given the bank with the superiority against other competitors. The bank hence needs to consistently meet customer’s service inquiry appropriately.
- The systems reliability in handling transaction on POS is one of the strength of CBE that influenced customer satisfaction. The bank needs to intensively work on that strategically including putting in place the associated maintenance and enhance its service reliability by continually making an assessment. The bank need also adopt the latest technology practiced in the electronic banking service.
- The bank currently does not charge the transaction made by the POS terminals to encourage users to use the POS machines as often as possible. However, freeing the

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charge alone is not an appealing to the customers of the bank to use POS machines to conduct their transaction. Thus, the bank needs to emphasize on inclusion of provision of a range of services via the POS terminal.

- Tangibility of the POS terminals is one of the main factors in customers' satisfaction. The bank need to set standard in this aspect to its POS terminals as it does not pay attention to placing adequate decoration and branding in the POS payment areas with necessary visible signage to customers of the merchants as well as cleanliness and neatness of the POS has placed an obstacle to the growth in the expansion of the use of POS machines.

#### **5.4 Suggestions for Future Research**

Further research needs to be carried out on a larger population and sample size to measure the general viability of the findings on overall use of POS machines. Factors that can assess indirect influencing aspects such as mediating variables, for instance, customer involvement, income level of respondents and moderating variable like gender, educational status, and age of customer should be included in the study that could affect customer satisfaction on the use of POS to obtain more comprehensive understanding. The result of this study indicated that there is a need to emphasize on tangibility as it affects customer satisfaction adversely and a new outlook in terms of the bank's policy and customer approach that can enhance satisfaction need to be studied specifically. Moreover, the BSQ model has been used by prior studies associated with E-banking channels as it is specifically designed to investigate banking products and services. However, almost all channels are primarily rendered by the bank itself for a peculiar channel such as POS that need a mediator as a host provider of the subject, there is still a gap which captures such element and possibly the reason for the presence of low Adjusted R2 of the study.

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Hence, the researcher suggests the inclusion of such construct to enhance the representativeness of the model for future studies that assess the POS services.

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# Appendix I

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**Addis Ababa University, School of Commerce**

**MA Program in Marketing Management**

Dear Respondents, I am conducting a research in partial fulfilment of my Master's Degree in Marketing Management at Addis Ababa University School of Commerce. The purpose of this study is to examine the 'Effect of Point of Sale (POS) services Quality on Customer Satisfaction' particularly at Commercial Bank of Ethiopia. This is, therefore, to kindly request your esteemed organization to take some of its precious time and fill the questionnaire. I can assure you that the survey won't take much of your time to complete. I would also like to assure the responses will only be used for academic purpose and all the answers provided by your selected staff will be kept in the strictest confidentiality.

Thank you in advance for your cooperation in filling the questionnaire.

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## **Important aspects of the questionnaire**

1. There is no need to write the organization name or any other personal identity
2. For all questions, mark or circle the alternative numbers of your choice
3. Select more than one answer, if applicable.

**Notice; the Questionnaire must only be filled by those employee of the organization who directly accept card payment using POS machine of CBE for the purchase of goods and services.**

### **Part One: General Information**

1. For how long have your organization been the customer of CBE?
  - A. Less than 1 Year
  - B. 1-3 Years
  - C. 4-10 Years
  - D. More than 10 Years
2. How long it has been since your business organization acquired CBE's POS machine?
  - A. Less than a Year
  - B. 1-3 Years
  - C. 4-10 Years
  - D. More than 10 Years
3. How your business organization does acquire the POS Machine of CBE?
  - A. By asking the Bank
  - B. The Bank itself took the initiative and availed the POS
  - C. Via CBE's agent
  - D. I don't recall/Remember
3. Is there any other Bank's POS deployed at your business site?
  - A. Yes
  - B. No
4. Do you prefer CBE POS relative to Other Bank's POS?
  - A. Yes
  - B. No

**Part two: Customers' Perception**

The following statement relate to your perception (view/opinion/observation) regarding the quality of Commercial Bank of Ethiopia's POS Services provided to your business organization.

Please show the extent to which your organization believe the bank has the feature described by the statement after reading carefully using the following scale:

**KEY: 1= Strongly Disagree**

**2= Disagree**

**3= Neutral**

**4= Agree**

**5= Strongly Agree**

Direction: Please show your level of agreement to the below statements by putting an "X" or" √ "mark in the box provided.

S.N	Bank Service Quality Dimensions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>Effectiveness &amp; Assurance</b>						
1	The behavior of the support personnel of the bank instills confidence.					
2	The Bank employees give recognition to regular customers with special service.					
3	The support personnel of the bank is considerate and handle the					

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	business company's issues very well					
4	The bank places greater importance on customers' POS transaction confidentiality					
5	The Bank employees value customers by handling them well					
6	The bank's POS machine has no interruption of service					
7	The bank has well-trained support Personnel					
8	The support personnel of the Bank knows the client needs very well					
9	There is no contradiction between the decision of the support personnel and management of the bank concerning the business company they are serving					
10	The bank provides its services related to POS at the right time it promises to do so					
11	The bank has good reputation at your business company					

12	The business company you are serving has a confidence in the POS system of the bank and feel secured					
13	The bank's advertisement, guidelines & contracts regarding the POS services indicates the services features clearly & explicitly					
<b>Access</b>						
14	The bank has deployed sufficient number of POS as demanded by the business company					
15	The bank's POS machine is modern and latest one					
16	The waiting time of the bank to get support concerning the POS issues is short and not too long					
17	The bank has assigned adequate number of support personnel to your company					
18	The call line queue at the contact					

	center of the bank don't take long & moves rapidly					
<b>Price</b>						
19	The bank properly & periodically notifies the term & tariffs of the POS services whenever required					
20	The bank provide an adequate explanation of the service fees that are associated to POS					
21	The bank let its customer know the minimum transaction value at which the service charge begins					
22	The bank sets reasonable fees for administering sales transaction through POS					
23	The bank keeps customers informed every time that a better solution appears for POS problems.					
<b>S.N</b>	<b>Bank Service Quality Dimensions</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>Tangibles</b>						
24	The Bank's POS report/statement					

	is accurate & precise					
25	The bank's POS terminal has good level of cleanliness & neatness.					
26	The bank's POS terminals are decorated and branded with the necessary signage					
27	The bank has efficacious work environment whenever visit is paid to attend meeting or workshop concerning POS services					
<b>Service Portfolio</b>						
28	The bank provides a range of services via POS terminal					
29	The range of services provided via POS are consistent with the latest technology in Banking Service					
<b>Reliability</b>						
30	The bank's POS service is free from error					
31	The bank's POS system has reliable filing/documentation feature					

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**Part three: Customer Satisfaction**

Please rate CBE’S POS services & performance by circling the number from the 5 –point scale below that reflects your company satisfaction level.

32	I am satisfied with the effectiveness and assurance of the POS services provided by the bank.						
33	I am satisfied with the accessibility of the POS services provided by the bank.						
34	I am satisfied with the price of the POS services provided by the bank.						
35	I am satisfied with the tangibles used by the bank to provide the POS service.						
36	I am satisfied with the service portfolio of the POS services provided by the bank.						
37	I am satisfied with the overall service quality of the POS services.						

**Thank You for Your Cooperation!**

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## አዲስ አበባ ዩኒቨርሲቲ ንግድ ስራ ኮሌጅ

### የገበያ አመራር ድህረ-ምረቃ ፕሮግራም

#### የባንኮች አገልግሎት ጥራት መጠይቅ

##### ውድ መላሾች

ይህ ጥናት ከንግድ ስራ ኮሌጅ የድህረ ምረቃ ትምህርት ክፍል (Master of Art in Marketing Management) ክፍል ሚሚያነት በኢትዮጵያ ንግድ ባንክ የግብይት መፈጸሚያ ማሸን (ፖስ) አገልግሎት ጥራት በደምበኞች እርካታ ላይ ያለውን ውጤት ለማወቅ ያተኮረው። የምርምር ጥናቱ የባንኮች ተወዳዳሪ እና ጥራት ተኮር የግብይት መፈጸሚያ ማሸን (ፖስ) አገልግሎት ለደንበኞቻቸው ለማቅረብ የሚያደርጉት ጥረት ያግዛል ተብሎ ይታመናል። በመሆኑም በድርጅቱ ውስጥ የባንኩን የግብይት መፈጸሚያ ማሸን (ፖስ) በመጠቀም ክፍያ የሚቀበሉትን ሠራተኞች ይህንኑ በመገንዘብ መጠይቁን በአግባቡ በመሙላት የበኩላቸውን ትብብር እዲያደርጉ በትህትና እየጠየኩኝ፤ ከዚህ መጠይቅ ጋር ተያይዞ የሚሰጡ ማንኛውም ምላሾች በተገቢው ሁኔታ በሚሰጥ የሚያዙ ከመሆኑም ባሻገር ለጥናቱ አገልግሎት ብቻ የሚውል መሆኑን ላረጋግጥሎት እወዳለው።

ለጥናቱ ስኬት ለምታደርጉልኝ ትብብር በቅድሚያ አመሰግናለው።

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##### ማሳሰቢያ

1. ስምዎን /የንግድ ድርጅቱን ስም መጻፍ አያስፈልግም
2. በሁሉም መጠይቅ የተሰጡን አማራጮች ያክብቡ
3. በሚያስፈልግበት ቦታ ከአንድ በላይ መልስ መምረጥ ይቻላል።

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## ክፍል አንድ፡ ጠቅላላ መረጃ

መመሪያ፡ እባክዎ ለጥያቄዎቹ በመልስነት ከቀረቡት አማራጮች ድርጅቱን ከባንኩ ጋር ያለውን ግንኙነት የሚገልፀውን ምላሽ ይህን ምልክት (✓) በማድረግ ምላሾችን ይስጡ

1. የንግድ ድርጅቱ ለስንት አመት ያህል ከኢትዮጵያ ንግድ ባንክ ጋር በደምበኝነት ቆየ?

- ከአንድ አመት በታች     ከ1-3 አመት     ከ4-7 አመት     ከ7 አመት በላይ

2. የንግድ ድርጅቱ የኢትዮጵያ ንግድ ባንክ የግብይይት መፈፀሚያ ማሽን (ፖስ) አገልግሎት ተጠቃሚ ከሆነ ስንት አመት ሆነው ?

- ከአንድ አመት በታች     ከ1-3 አመት     ከ4-7 አመት     ከ7 አመት በላይ

3. የንግድ ድርጅቱ ከኢትዮጵያ ንግድ ባንክ የግብይይት መፈፀሚያ ማሽን (ፖስ) አገልግሎት በምን መንገድ ለማግኘት ቻለ?

- ባንኩን በመጠየቅ
- ባንኩ የንግድ ድርጅቱን በማነጋገር ተጠቃሚ እንዲሆን አደረገ
- በባንኩ ወኪል ድርጅት አማካኝነት
- አላስታውስም

4. በንግድ ድርጅቱ ውስጥ የሌላ ባንክ የግብይይት መፈፀሚያ ማሽን (ፖስ) አለ?

- አዎ     የለም

5. የንግድ ድርጅቱ የኢትዮጵያ ንግድ ባንክ የግብይይት መፈፀሚያ ማሽን (ፖስ) አገልግሎትን ከሌሎች ባንክ የግብይይት መፈፀሚያ ማሽን (ፖስ) አገልግሎት ይልቅ ይመርጣል?

- ይመርጣል     አይመርጥም

**ክፍል ሁለት፡ የአገልግሎት ጥራትን በተመለከተ የደምበኞች አመለካከት**

**መመርያ፡** ከታች የተቀመጡት የግብይት መፈጸሚያ ማሽን (ፖስ) አገልግሎት ጥራትን መገለጫ ዝርዝሮች ከባንኩ የግብይት

መፈጸሚያ ማሽን (ፖስ) አገልግሎት ጥራት ጋር የተያያዙ ናቸው። ስለሆነም መጠይቁን በትኩረት ካነበቡ በኋላ ከ1 -5

በተቀመጡት ቁጥሮች ይህንን ምልክት(✓) እንዲያስፍሩ እጠይቃለሁ

1. በጣም አልሰማማም
2. አልሰማማም
3. አስተያየት የለኝም
4. እሰማማለሁ
5. በጣም እሰማማለሁ

ተ. ቁ	የባንክ አገልግሎት ጥራት	በጣም አልሰማማም	አልሰማማም	አስተያየት የለኝም	እሰማማለሁ	በጣም እሰማማለሁ
<b>ውጤታማነት እና ዋስትና/መተማመኛ</b>						
1	የባንኩ የድጋፍ ሰጪ ሠራተኞች የስራ ባህሪ የደምበኞች መተማመንን ይጨምራል					
2	የባንኩ የድጋፍ ሰጪ ሠራተኞች ለመደበኛ ደምበኞች የተለየ አገልግሎት በመስጠት እውቅናን ይሰጣሉ					
3	የባንኩ የድጋፍ ሰጪ ሠራተኞች ደምበኞችን የሚረዱ እና ከግብይት መፈጸሚያ ማሽን (ፖስ) ለሚገጥሙ ችግሮች መፍትሄ ሰጪ ናቸው					
4	ባንኩ ደምበኞች የግብይት መፈጸሚያ ማሽን (ፖስ) ተጠቅመው የሚያደርጉትን ግብይት ሚስጥር ጠባቂነት ላይ ትልቅ ትኩረት ሰጥቶታል					
5	የባንኩ ሠራተኞች ደምበኞችን በአግባቡ ለማገልገል ትልቅ ዋጋ ይሰጣሉ					
6	የባንኩ የግብይት መፈጸሚያ ማሽን (ፖስ) የአገልግሎት መቆራረጥ የለውም					

7	ባንኩ በአግባቡ የሰለጠኑ ድጋፍ ሰጪ ሠራተኞች አሉት					
8	ባንኩ ድጋፍ ሰጪ ሠራተኞች የባንኩን ደምበኞች ፍላጎት በሚገባ የተገነዘቡ ናቸው					
9	ባንኩ የግብይይት መፈጸሚያ ማሽን (ፖስ) አገልግሎት ለሚሰጣቸው የንግድ ድርጅቶች አስመልክቶ በባንኩ አመራር እና በድጋፍ ሰጪ ሠራተኞች ውሳኔ መካከል ምንም አይነት ተፃራሪ ሃሳብ የለም					
10	ባንኩ የግብይይት መፈጸሚያ ማሽን (ፖስ) አገልግሎትን ለደምበኞቹ ቃል በገባው ተገቢ ሰዓት መሠረት ያከናውናል					
11	ባንኩ በንግድ ድርጅቱ ውስጥ መልካም ስም አለው					
12	የንግድ ድርጅቱ በባንኩ ጠቅላላ የግብይይት መፈጸሚያ ማሽን (ፖስ) አሰራር ላይ እምነትና ደህንነት ይሰማዋል					
13	የግብይይት መፈጸሚያ ማሽን (ፖስ) አገልግሎት አስመልክቶ የሚወጡ የባንኩ ማስታወቂያዎች፣ መመሪያዎች እና ውሎች የአገልግሎቱን አይነት በግልፅ በዝርዝር ያመለክታሉ					
<b>ተደራሽነት</b>						
14	ባንኩ በቁቁጥር ያላቸውን የግብይይት መፈጸሚያ ማሽኖች (ፖስ) በንግድ ድርጅቱ በሚፈለገው መጠን አስቀምጧል					
15	ባንኩ የግብይይት መፈጸሚያ ማሽን (ፖስ) ዘመናዊና ወቅቱን የጠበቀነው					
16	የግብይይት መፈጸሚያ ማሽን (ፖስ) በተመለከተ አገልግሎት ወይም ድጋፍ ለማግኘት ባንኩ የሚያስጠብቀው ጊዜ አጭርና ብዙ ረጅም አይደለም					
17	ባንኩ በበቂ ሁኔታ የድጋፍ ሰጪ ሠራተኞችን ለንግድ ድርጅቱ መድቧል					
18	በባንኩ የግንኙነት ማፅከል ያለው የስልክ ጥሪ መስመር ሰልፍ ብዙ ጊዜ የማይወስድና በፍጥነት የሚሄድ ነው					

<b>ዋጋን በተመለከተ</b>						
19	ባንኩ የግብይይት መፈጸሚያ ማሸን (ፖስ) የአገልግሎት ክፍያ/ዋጋ በአግባቡና በወቅቱ ለደምበኞቹ ያሳውቃል					
20	ባንኩ የግብይይት መፈጸሚያ ማሸን (ፖስ) ክፍያን በተመለከተ በቂ ማብራሪያን ይሰጣል					
21	ባንኩ የግብይይት መፈጸሚያ ማሸን (ፖስ) የአገልግሎት ክፍያ የሚጀመርበትን መነሻ የግብይት ዋጋ ለደምበኞች ያሳውቃል					
22	ባንኩ የግብይይት መፈጸሚያ ማሸን (ፖስ) በኩል የንግድ ድርጅቱን የሽያጭ ግብይይት ለማስተናገድ የሚያቀርበው ዋጋ ምክንያታዊ ነው					
23	ባንኩ የግብይይት መፈጸሚያ ማሸን (ፖስ) ችግሮችን በተመለከተ በቂ እና ወቅታዊ መፍትሄ ሲያገኝ ሁልጊዜ ለደምበኞች ያሳውቃል					
<b>ተጨማሪ ሁኔታዎች</b>						
24	የባንኩ የግብይይት መፈጸሚያ ማሸን (ፖስ) መረጃዎች ትክክለኛ እና አስተማማኝ ናቸው					
25	የባንኩ የግብይይት መፈጸሚያ ማሸን (ፖስ)ንፁህና ፅዱ ነው					
26	የባንኩ የግብይይት መፈጸሚያ ማሸኖች (ፖስ) አግባብነት ያላቸው የድርጅቱ አርማዎች ያላቸውና የተዋቡ ናቸው					
27	ባንኩ የግብይይት መፈጸሚያ ማሸን (ፖስ) አሰራር በተመለከተ ስብሰባ ወይም የስራ አውደ ራዕይ ለማስተናገድ የሚያስችል ምቹ የሆነ የስራ አካባቢ አለው					
<b>የአገልግሎት ስፋት እና ዓይነቶች</b>						
28	የባንኩ የግብይይት መፈጸሚያ ማሸን (ፖስ) ለንግድ ድርጅቱ የካርድ ክፍያን መቀበልን ጨምሮ የተለያዩ ተጨማሪ አገልግሎቶችን ይሰጣል					
29	በባንኩ የግብይይት መፈጸሚያ ማሸን (ፖስ) በኩል ለንግድ ድርጅቱ የሚሰጡት የተለያዩ አገልግሎቶች ዘላቂ የሆኑ እና ዘመናዊ የባንክ					

	አገልግሎት ቴክኖሎጂ ያሟሉ ናቸው					
<b>ታማኝነት</b>						
30	የባንኩ የግብይይት መፈጸሚያ ማሽን (ፖስ) ከስህተት የፀዳ ነው					
31	የባንኩ የግብይይት መፈጸሚያ ማሽን (ፖስ) የአሰራር ሂደት ታማኝነት ያለው የመረጃ/የሰነድ አያያዝ አለው					

ከዚህ በታች የተዘረዘሩት መጠይቆች ደንበኞች በባንኩ የፖስ አገልግሎት አሰጣጥ ላይ ያላቸውን የእርካታ መጠን የሚያሳይ ስለሆነ እባክዎ ከ1 - 5 ደረጃ በመምረጥ መልሱትን ያስቀምጡ፡፡

ተ.ቁ	የባንክ አገልግሎት ጥራት	በጣም አልሰማማም	አልሰማማም	አስተያየት የለኝም	እስማማለሁ	በጣም እስማማለሁ
32	ባንኩ በሚሰጠው ውጤታማ እና አስተማማኝ በሆነ የፖስ አገልግሎት ደስተኛ ነኝ					
33	በባንኩ የፖስ አገልግሎት ተደራሽነት ደስተኛ ነኝ					
34	በባንኩ የፖስ አገልግሎት ክፍያዎች ደስተኛ ነኝ					
35	ባንኩ የፖስ አገልግሎት ለማስጠት በሚጠቀሙት ተጨባጭ ትእይንቶች ደስተኛ ነኝ					
36	ባንኩ በሚያቀርባቸው የተለያዩ የፖስ የአገልግሎት ስፋት እና ዓይነቶች ደስተኛ ነኝ					
37	ባንኩ በሚሰጠው አጠቃላይ የፖስ አገልግሎቶች ደስተኛ ነኝ					

**ስለ ትብብር አመሰግናለሁ!!!**

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# Appendix II

**Reliability Statistics**

<b>Cronbach's Alpha</b>	<b>No of Items</b>
.893	7

**Item-Total Statistics**

<b>Variables</b>	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha</b>
EA	19.8179	16.788	.708	.878
AC	20.0380	16.052	.793	.868
PR	20.2459	14.913	.716	.874
TA	19.8851	15.620	.761	.869
SP	20.0416	15.242	.734	.872
RE	20.2719	13.721	.685	.888
CS	19.7561	17.359	.577	.890

**Descriptive Statistics**

<b>Dimensions</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>
EA	260	2.00	4.77	3.5322	.64076
AC	260	1.60	4.60	3.3115	.68881
PR	260	1.00	4.80	3.1131	.92964
TA	260	1.75	5.00	3.4529	.77605
SP	260	1.00	5.00	3.3058	.85637
RE	260	1.00	5.00	3.1038	1.16695

**Correlations**

		<b>EA</b>	<b>AC</b>	<b>PR</b>	<b>TA</b>	<b>SP</b>	<b>RE</b>	<b>CS</b>
<b>EA</b>	Pearson Correlation Sig. (2-tailed) N	1 260						
<b>AC</b>	Pearson Correlation Sig. (2-tailed) N	.758** .000 260	1 260					
<b>PR</b>	Pearson Correlation Sig. (2-tailed) N	.525** .000 260	.640** .000 260	1 260				
<b>TA</b>	Pearson Correlation Sig. (2-tailed) N	.570** .000 260	.700** .000 260	.600** .000 260	1 260			
<b>SP</b>	Pearson Correlation Sig. (2-tailed) N	.548** .000 260	.616** .000 260	.597** .000 260	.715** .000 260	1 260		
<b>RE</b>	Pearson Correlation Sig. (2-tailed) N	.497** .000 260	.572** .000 260	.578** .000 260	.588** .000 260	.588** .000 260	1 260	
<b>CS</b>	Pearson Correlation Sig. (2-tailed) N	.593** .000 254	.524** .000 254	.499** .000 254	.383** .000 254	.418** .000 254	.454** .000 254	1 254

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.649 <sup>a</sup>	.421	.407	.506

a. Predictors: (Constant), RE, EA, PR, SP, TA, AC

b. Dependent Variable: CS

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.132	6	7.689	29.977	.000 <sup>b</sup>
	Residual	63.351	247	.256		
	Total	109.483	253			

a. Dependent Variable: CS

b. Predictors: (Constant), RE, EA, PR, SP, TA, AC

*Normality Test*

Dimensions	Statistics	Mean	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
EA	260	3.5322	-.108	.151	-.020	.301
AC	260	3.3115	.040	.151	.115	.301
PR	260	3.1131	-.117	.151	-.789	.301
TA	260	3.4529	-.122	.151	-.430	.301
SP	260	3.3058	-.189	.151	.112	.301
RE	260	3.1038	.048	.151	-1.055	.301

**Multicolilneraity**

Model		Correlations			Collinearity Statistics	
		Zero-order	Partial	Part	Toleranc e	VIF
1	(Constant )					
	EA	.593	.339	.274	.416	2.406
	AC	.524	.042	.032	.293	3.415
	PR	.499	.205	.160	.492	2.032
	TA	.383	-.127	-.098	.354	2.821
	SP	.418	.032	.024	.415	2.409
	RE	.454	.151	.116	.532	1.881
a. Dependent Variable: CS						

**DW Test result of autocorrelation**

TEST	Durbin-Watson value
DW result	1.704

**Multiple Regression results**

**Coefficients<sup>a</sup>**

Model		Unstandardize d Coefficients	Std. Error	Standardize d Coefficients	t	Sig.
		B		Beta		
1	(Constant )	1.487	.186		8.003	.000
	EA	.433	.076	.426	5.669	.000
	AC	.055	.085	.058	.653	.514
	PR	.160	.049	.227	3.295	.001
	TA	-.138	.068	-.164	-2.018	.045
	SP	.028	.057	.037	.496	.621
	RE	.090	.038	.159	2.395	.017

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a. Dependent Variable: CS

*Summary of Hypothesis*

No	Hypothesis	Index of Variable	Significance	Status
H1:	Effectiveness and Assurance of the POS service have a positive and significant effect on Customers' satisfaction.	EA	.000	Accepted
H2:	Accessibility of the POS service has a positive and significant effect on Customers' satisfaction.	AC	.514	Rejected
H3:	Pricing of the POS service has a positive and significant effect on Customers' satisfaction.	PR	.001	Accepted
H4:	Tangibility of the POS service has a positive and significant effect on Customers' satisfaction.	TA	-.045	Rejected
H5:	Service Portfolio of the POS service has a positive and significant effect on Customers' satisfaction.	SP	.621	Rejected
H6:	Reliability of the POS service has a positive and significant effect on Customers' satisfaction.	RE	.017	Accepted