International Journal in Commerce, IT and Social Sciences
Volume 11 Issue 02, Feburary 2024 ISSN: 2394-5702 Impact Factor: 8.218
Journal Homepage: http://ijmr.net.in, Email: irjmss@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal

EFFECTS OF E-BANKING SERVICE QUALITY ON CUSTOMERS' SATISFACTION: THE CASE OF NIB BANK

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ABSTRACT: *This study aimed to examine the effect of electronic banking service quality on customers' satisfaction at Nib International Bank (NIB). The study adopted descriptive as well as explanatory research design. The study examined electronic banking service quality in terms of six dimensions namely: efficiency, system availability, fulfillment, privacy and security, ease of use, and quality of recovery. The study gathered primary data via questionnaire from 184 randomly chosen customers of electronic banking at four purposively chosen Nib Bank branches in Addis Ababa, namely the Premium, Arat Killo Premium, Main, and Tana branches. The result revealed that the combined effect of various electronic banking service quality dimensions significantly influenced customer satisfaction positively. The value of adjusted R2 is 0.785 tells that the six electronic banking service quality dimensions can account for 78.5% of the variation in the overall customers satisfaction at Nib Bank electronic banking service. In terms of individual effect, all six independent variables, that are efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service that are considered in this study are significant in predicting the customers satisfaction in Nib Bank electronic banking service. Thus, the study concluded that electronic banking service quality has significant effect on customers' satisfaction at Nib International Bank. Therefore, the management of Nib Bank should influence these electronic banking service quality dimensions as a way of ensuring that e-banking customers get the satisfaction.*

Key Words*: Electronic Banking, Service Quality, Customer Satisfaction, Nib Bank*

1. INTRODUCTION

1.1. Background of the Study

Financial system in Ethiopia is very much behind in the implementation of E-Banking services compared to the rest of world and even Sub-Saharan region (Birku, 2019). Despite moderate effort undertaken by banks to offer e-banking products to attract clients, E-Banking services has a long way to go in Ethiopia because the country was listed the last second for financial inclusion from 26 geographically and economically same countries (GPFI, 2016).

Despite the fact that Ethiopian financial system is very much behind in the implementation of financial innovations, the Ethiopian financial sector cannot remain an exception in expanding the use of the system. Subsequently, Nib International Bank is one of private commercial bank in Ethiopia that has tremendously embraced the use of information and communication technologies in its service provision. The bank has invested huge amounts of money in implementing the self and virtual banking services. Common embodiments of e-banking channels of Nib Bank: Mobile/SMS Banking, POS Banking, ATMs, and internet banking. Accordingly, the questions relate to whether the emergence of such types of E-Banking channels represented positive change and are affecting satisfaction of

customers of the bank will have greater importance. Thus, the study therefore seeks to examine the effect of E-banking service quality on customer satisfaction in Nib International Bank.

1.2. Problem Statement

Regarding literature gaps identified, the researchers realize that even if a lot of attention has been given in exploring the extent of the relationship between service quality and customer satisfaction (Agbor, 2011; Uddin & Bilkis 2012; Million, 2015; Maykil, 2019), there is inconsistent result on the relationship between two variables. A number of studies have addressed the relationship between service quality and customer satisfaction and many of the studies have linked service quality and customer satisfaction as having direct relationship (Wu and Lang, 2009; Kuo et al.,2009; Million, 2015; Maykil, 2019). However, some other studies have depicted weak and insignificant link (Nimako et.al 2010; Uddin & Bilkis 2012; Agbor, 2011). Consequently, the cause of these mixed results needs further research.

Similarly, most of the previous studies in Ethiopia (Million, 2015; Fikerselassie 2017; Sintayehu & Sapana, 2022) were used service quality dimension called SERVQUAL which is developed for general service and as such it is limited use for the measuring the electronic banking service quality. In line with, most of prior studies (Million, 2015; Fikerselassie 2017; Maykil, 2019) had neglected to take into account the most crucial aspects of electronic banking services quality dimensions, such as efficiency, system availability, service recovery, which have a significant impact on customers' levels of satisfaction.

In line with customers' complaints with electronic services, the bank electronic banking services department report (2022) revealed that the number of customers who are complaining on the electronic bank services increasing during the last two years. Customers also have complaints about the speed and security of the bank's online banking services. Furthermore, there is no empirical investigation has been conducted regarding the effect of electronic banking service quality on customer satisfaction with in context of Nib Bank. This study, therefore, tries to fill this empirical gap in research by conducting a study on effect of electronic banking service quality on customer satisfaction in Nib International Bank.

1.3. Research Questions

Based on the aforementioned problems the study was framed to answer the following research questions.

1) How do customers perceive the quality of electronic banking services of Nib Bank?
2) To what extent customers are satisfied with Nib Bank electronic banking services?
3) What is the relationship between electronic banking services quality and customer satisfaction at Nib Bank?
4) To what extent quality of electronic banking services affect customer satisfaction at Nib Bank?

2. LITERATURE REVIEW

2.1 Review of Theoretical Literatures

2.1.1. Electronic Banking

In simple terms, E- banking means it does not involve any physical exchange of money, but it's all done electronically through the internet. E-banking provides faster delivery of banking services to customers and it provides lot benefits and banking facilities to customer that by sitting at home customer can access their account through internet (Omodele & Onyeiwu, 2019). Electronic banking is a combination of electronic technology with a banking sector. E-banking involves providing banking services to customers through various electronic delivery channels (Chen, et al., 2012).

2.1.2. Electronic Banking Channels

There are many electronic banking delivery channels to provide banking service to customers. Among them ATM, POS, mobile banking and internet banking are the most widely used and discussed below.

2.1.2.1 Mobile Banking

With rapid advance of internet technologies and diffusion of mobile phones, mobile banking has gained attention as a viable option in delivering financial services. Recent innovations in telecommunications have enabled the launch of mobile banking as a new access method for banking services; whereby a customer interacts with a bank via mobile phone (Barnes & Corbitt 2003). The services of mobile banking can be used to raise proficiency and help business develop through efficient, cheap and reliable money service support system that lessen the need for cash transaction and the associated risks (Anyasi & Otuba, 2009). It provides the benefits of banking services such as being able to save and borrow in a cost-efficient and secure way. The services include opening bank accounts, viewing account balances, making cash transfers between accounts, or paying bills via a mobile device.

2.1.2.2 Internet Banking

Internet banking refers to platform that allow bank customers to get access to their accounts through the use of banks website, without the intervention or inconvenience of sending letters, faxes, original signatures and telephone confirmations (Simon, 2018).

To date, the rapid spread of Internet banking all over the world its acceptance as an extremely cost effective and efficient delivery channel of banking services as compared to other existing channels (Omodele and Onyeiwu, 2019). The development of Internet banking has transformed the distribution channel structure in bank sector (Hindu, et al., 2018). The modern internet banking methods are new to the Ethiopian banking sector, and all banks in Ethiopia are too late to move with technological advancement and they should clearly chart out the time plan for their integration and technological advancement (Daniel, 1999).

2.1.2.3 Automated Teller Machine (ATM)

Automated Teller Machine (ATM) is the first well-known machines to provide electronic access to customers. With the advent of ATM, banks are able to serve customers outside the banking hall. ATM system is system that links banks and other financial organizations to retail banking customers for numerous types of routine banking transactions (Timothy, 2012). These include inquiries, deposits, cash withdrawals, cash transfers and payments. It

does all through an access to personal identification number (PIN), and a plastic that contains magnetic chip, which the customers identified through (Magembe and Shemi, 2002).

Literature shows that ATM banking has received customer preference to become the second most popular channel for accessing banking products/services behind branch banking (Charles, 2016). ATM is the most dominant innovation channel among those banks, which are currently providing the service in Ethiopia.

2.1.2.4. Point of sale (POS)

Point of sale (POS) also sometimes referred to as point of purchase (POP) or checkout is the location where a transaction occurs. A 'checkout' refers to a POS terminal or more generally to the hardware and software used for checkouts, the equivalent of an electronic cash register. A POS terminal manages the selling process by a salesperson accessible interface. The same system allows the creation and printing of the receipt. Because of the expense involved with a POS system, the eBay guide recommends that if annual revenue exceeds the threshold of $700,000, investment in a POS system will be advantageous. POS systems record sales for business and tax purposes (Timothy, 2012).

2.1.3. Concepts of Service and Service Quality

According to Nguyen, et al (2020), Service is a practice consisting of intangible activities that normally takes place in interaction between the customer and the service provider. Services are more or less subjectively experienced process where production and consumption activities take place simultaneously.

According to Meirelles (2006), a service is intangible and only measured when combined with other functions. For instance, since a service is not something that one can touch to either evaluate its features before judgments, it can only be measured through the person providing the service. Intangibility simply put describes something that has no physical appearance and therefore untouchable. The intangibility nature of services could make consumers find it difficult to evaluate what they are paying for before completing payment for what they actually will receive.

Service Quality is excellence or superior service delivery process of the consumer expectations (Zeithaml & Bitner, 1996). The common definition of service quality is the alteration between consumers' perceptions of the services delivered by a service firm and their expectations toward that service (Parasuraman et al., 1988; Gronroos, 1984). Parasuraman, et al., (1985), explained that the creation of customer satisfaction for a service could be identified through a comparison between service perceptions with service expectation. Lehtinen and Lehtinen (1982) give a three-dimensional view of service quality. They see it as consisting of what they term "interaction", "physical" and "corporate"' quality.

2.1.4. Concept of Customer Satisfaction

According to Nguyen, et al (2020), satisfaction and dissatisfaction is a relationship between client expectations and the experience of the quality of service perceived by consumers is the goal of the organization. Customer satisfaction is one of the most important concepts in the field of marketing studies today (Horan & Abhichandani (2006). Broadly speaking, it links processes culminating in purchasing with post purchase phenomena such as attitude change, repeat purchase, and brand loyalty (Churchill & Surprenant, 1982).

Satisfaction can also be described as the feedback of a post purchase assessment of certain service/ product's quality, and compared with the expectation of the prior-purchasing stage (Kotler & Keller, 2011). In contrast, other researchers have observed that the impact practiced within the purchasing and consuming stage of the product/service may also have an important effect on the customer's judgments toward satisfaction (Homburg, Koschate, & Hoyer, 2005).

2.1.5. Dimensions of Service Quality in E-Banking

Delivering a higher service quality better than competitors gives an opportunity for the banks to achieve competitive differentiation and advantage (Ranganathan & Ganapathy, 2002). Akinci, Atilgan-Inan and Aksoy (2010) argue that the survival of an online related firm depends on the understanding the perception and assessment of electronic service quality (e-service quality) by consumers, and this is mainly true for e-banking. Indeed, Santos (2003) defines e-service quality as 'the consumers' overall evaluation and judgment of the excellence and quality of e-service offering in the virtual market place', and this definition describe the e-service quality in general as well as service quality in e-banking in particular.

Even though many authors have developed e-service quality models (See Table 2.1), all models have their own limitation. Most of the previous study employed Parasuraman et al. (2005) e-service quality model studies (e.g., Bauer, Falk & Hammerschmidt, 2006; Li & Suomi, 2007; Akinci et al., 2010; Sandhu & Bala, 2011; Janita & Miranda, 2013; Kim & Nitecki, 2014).

Table 2.1: E-service quality models and dimensions for various contexts

Authors/ models	Dimensions	Context
Dabholkar (1996)	Web site design, reliability, delivery, ease of use, enjoyment and control	E-service
Yoo and Douthu (2001)/ Site Qual	Ease of use, aesthetic design, processing speed, and security	Online retailing
Barnes and Vidgen (2002)/ Web Qual	Usability, design, information, trust and empathy	Online retailing
Wolfinbarger and Gilly (2003)/ Etail Qual	Web site design, fulfillment/ reliability, security/privacy and customer service	Online retailing
Yang et al. (2004)	Reliability, responsiveness, competence, ease of use, security and product portfolio	Online retailing
Parasuraman et al. (2005)/ E-S-Qual and e-RecS-Qual	Efficiency, system availability, fulfillment, privacy, responsiveness, compensation and contact	E-service
Yang et al. (2005)	Usability, usefulness of content, adequacy of	Web portals

	information, accessibility and interaction	
Cristobal et al. (2007)/ PeSq	Web design, customer service, assurance and order management	E-commerce
Akinci et al. (2010)	e-service quality model: efficiency, system availability, fulfillment, privacy, responsiveness, compensation and contact	E-banking
Ding et al. (2011)/e-SELFQUAL	Perceived control, service convenience, client support and service fulfillment	Online retailing
Kaisara and Pather (2011)	Information quality, security, communication, website aesthetics, website design and access	E-government

Parasuraman et al. (2005) e-service quality model is rooted from mean-end framework, and they develop E-S-QUAL (e-service quality) with four dimensions: efficiency, system availability, fulfillment and privacy. While E-Rec S-QUAL (quality of recovery service provided by firm's web sites) with three dimensions: responsiveness, compensation and contact for measuring the service quality delivered by Web sites on which customers shop electronically (See Figure 2.1). Importantly, Parasuraman et al. (2005) e-electronically (See Figure 2.1).

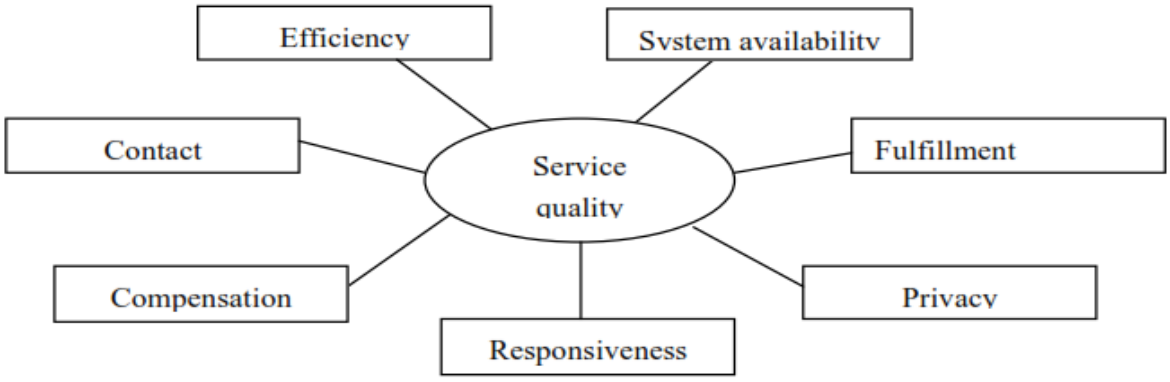

Figure 2.1: Parasuraman et al. (2005) e-service quality model for e-banking

Even though Parasuraman et al. (2005) e-service quality model is relatively more comprehensive model, it has its own limitation. In particular, the Parasuraman et al. (2005) missed some important electronic banking services quality dimension like ease of use and security, which are important for electronic banking services quality. Considering such limitation of the Parasuraman et al. (2005) model, the present study considers some additional electronic banking services quality dimension, like, ease of use and security, which are missed in Parasuraman et al. (2005) model. Thus, this study is unique as it considered comprehensive electronic banking service quality model by considering multiple dimensions of services quality, which include: efficiency, system availability, fulfillment, privacy and security, ease of use, responsiveness, compensation and contact.

2.2. Conceptual Framework

A conceptual framework is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Kombo & Tromp, 2009). The general idea from the past literature is that there is a relationship between customer

satisfaction and electronic banking service quality. Based on the theoretical and empirical literature concerning the relationship between electronic banking service quality and customer satisfaction, the present study develops the following conceptual framework.
This study presents more comprehensive model of electronic banking service quality as it considered multiple electronic banking services quality dimensions which include: efficiency, system availability, fulfillment, privacy and security, ease of use, and quality of recovery (responsiveness, compensation and contact) are the dimensions of service quality for e-banking as replication to the existing literature.

Figure 2.2: Conceptual Framework

Source: Developed by the researchers from literature review (2023)

2.3.Research Hypotheses

For providing answers for the basic questions, based on empirical literature and conceptual framework, the researchers empirically tested the following hypotheses.

- **Hypothesis 1**: Efficiency of electronic banking service has positive effect on customer satisfaction.
- **Hypothesis 2**: System availability of electronic banking service has positive effect on customer satisfaction.
- **Hypothesis 3**: Fulfilment of electronic banking service has positive effect on customer satisfaction.
- **Hypothesis 4**: Privacy & security of electronic banking service has positive effect on customer satisfaction.
- **Hypothesis 5**: Ease of use of electronic banking service has positive effect on customer satisfaction.

- **Hypothesis 6**: Recovery service of electronic banking services have positive effect on customer satisfaction.

3. RESEARCH METHODS

The study employed explanatory research design and quantitative research to examine the effect of electronic banking service quality on customer's satisfaction at Nib Bank. The population for this study is electronic banking customers, those who use the two dominant of electronic banking channels (Card, mobile and internet banking) of Nib Banks at four selected branches, namely: Nib Premium, Arat Killo Premium, Main and Tana branches at Addis Ababa. The bank has 2693 electronic banking customers at Nib Premium branch, 1944 electronic banking customers at Arat Killo Premium branch, 605 electronic banking customers at Main branch and 1,011 electronic banking customers at TANA branch, which gives a total more than 6,253 customers who are using all three forms of electronic banking channels (ATM card, mobile and internet banking). The target population of the study constitute in these four selected branches. The model to determine sample size as developed by Nassiuma (2000) is used for this purpose.

$$n = \frac{NC^2}{C^2 + (N-1)e^2} = \frac{6{,}253\ (0.3)^2}{0.3^2 + (6252)(0.02)^2} = \mathbf{217}$$

Where n = Sample size, N = population size, C = Coefficient of variation and e = Standard margin of error. Nassiuma (2000) recommends a margin error ranging between 2% - 5% and coefficient of variation ranging between 20% - 30%. For this study N = 6253, C = 30% and e = 0.02, which gives a sample of 217.

The study was employed a combination of stratified sampling techniques on which the respondents are structured into four strata (Nib Premium, Arat Killo Premium, Main and Tana branches). This is because each group of the respondents is required to have its own representative from the total sample size. Specific subgroups within a population are ensured to be sufficiently represented in the sample via stratified sampling. Therefore, the sample size for each stratum (branches) is presented in the following table.

Table 3.1: Population and Sample size

No	Strata	No. of Population	% of the total	No. of sample
1.	Nib Premium branch	2,693	43.1	93
2.	Arat Killo Premium branch	1944	31.1	67
3.	Tana special branch	1,011	16.2	35
4.	Main branch	605	9.7	21
	Total	**6,253.00**	**1.000**	**217**

The following multiple linear regression equation were used to examine the effect of electronic banking services quality dimension on customer satisfaction in Nib Bank S.C.

$$\mathbf{Yi = \beta 1xi1 + \beta 2Xi2 + \beta 3xi3 + \beta 4xi4 + \beta 5xi5 + \beta 6xi6 + e}$$

Where Yi represents customer satisfaction in Nib electronic banking services, while X1, X2, X3, X4 X5 and X6 represent the independent variables electronic banking services quality dimensions which are: efficiency, system availability, fulfillment and privacy, ease

of use and quality of service recovery). β0 is the constant, while β1, β2, β3, β4 β5 and β6 represent corresponding coefficients or parameters for the respective independent variables to be estimated and e represent the error term.

Necessary diagnostic tests on the variables were carried out to test whether the sample is consistent with the CLRM assumptions: Linearity, Normality, Homoscedasticity, Serial Correlation, and Multicollinearity. The result confirmed that the data "passed" these assumptions, which are required for multiple regressions to give a valid result. Furthermore, the study was employed Cronbachs' alpha to assess reliability of the questionnaire that testify all variables have a reliability coefficient (alpha) of 0.75 and above, which is accepted.

4. RESULTS AND DISCUSSION

4.1 Perception of Customers towards E-Banking Services Quality

4.1.1. Respondents Perception on Efficiency of E-banking Service

Efficiency is also a vital factor in maintaining user faithfulness and ensuring user fulfillment. According to Nimuku, et al (2013) the user requires their transaction to be completed through cyber-banking and efficiency means that maximum transactions are completed. According to Kheng et al. (2010), when their maximum demands are fulfilled with efficiency, the user tends to become happy and faithful to the cyber-bank service.

Table 4.1: Perception of E-banking service quality in terms of Efficiency

Indicators	Mean	STD
I can rely on the bank mobile banking functioning properly.	3.56	0.99
The bank's mobile banking enables to complete a transaction quickly.	3.63	0.98
The bank's mobile banking services makes easy to find what the user need.	3.67	0.94
I can rely on the bank internet banking functioning properly.	3.41	1.06
The bank's internet banking loads its pages fast.	3.23	1.13
The bank internet banking is always available for business.	3.27	1.07
I can rely on the bank ATM functioning properly.	3.77	0.85
I complete quickly a transaction through the bank's ATM.	3.84	0.75
The service I receive by ATM is usually efficient.	3.71	1.01
Overall, I can get efficient services via the bank's E-banking channels.	3.76	0.93
Grand Mean	**3.58**	**0.96**

Source: (Survey data, 2023)

As indicated on the table 4.1, the questions were provided to assess whether the bank's electronic banking service quality regarding efficiency is well performed or not. Accordingly, respondents give their respective view for each of the related questions. The grand mean response for E-banking service quality in terms of Efficiency is 3.58, which is high according to Shrestha (2015) interpretation guide. This indicate the E-banking service quality in terms of Efficiency is good. In terms of individual item statement that whether the customers complete quickly a transaction through the bank's ATM; got the highest mean (3.78), followed by statement, that whether customers can rely on the bank ATM functioning properly, which got mean (3.77).

4.1.2. Respondents Perception on System Availability of Electronic Banking

The second important dimension of service quality in relation to the electronic banking is system availability. System availability refers to the percentage of time that the infrastructure, system, or solution remains operational under normal circumstances in order to serve its intended purpose. For electronic banking infrastructure solutions, availability relates to the time that the data center is accessible or delivers the intend electronic banking service (Hammoud, 2018). High-availability environments minimize the chances of downtime and help businesses keep customers happy and build lasting relationships. In premise to this concept, the survey was provided related questions to assess respondent view on the availability of system in the electronic bank services. Table 4.2 illustrated respondents' perception on system availability of electronic banking.

Table 4.2: Respondents Perception on System Availability of Electronic Banking

Indicators	Mean	STD
The bank's mobile banking services is always available for business.	3.45	0.96
The bank's internet banking services launches and runs right away.	3.38	1.09
The bank's internet banking does not crash.	3.25	1.10
Pages at the bank's website do not freeze after enter order information.	3.19	1.09
The bank ATM is up and running all time.	3.42	1.05
The bank ATM is usually having a cash.	3.40	0.96
Overall, the bank's electronic banking channels are always available for business.	3.41	1.11
Grand Mean	**3.35**	**1.05**

Source: (Survey data, 2023*)*

As indicated on the table 4.2, the grand mean response for the bank electronic banking services quality in terms of system availability is 3.35, which is considered moderate according to Shrestha (2015) interpretation guide. This indicate the bank electronic banking services quality in terms of system availability is somehow moderate indicating that there are significant areas that need further improvement. In terms of individual item statement that whether the bank's mobile banking services is always available for business, got the highest mean (3.71); followed by statement that whether the bank ATM is up and running all time, which got mean (3.42). This shows that in terms of system availability, mobile and ATM banking are relatively better performing according to respondents' perception. On other hands, statement that whether pages at the bank's website do not freeze after enters order information, got lowest mean (3.19). Similarly, statement whether the bank's internet banking does not crash, also got relatively low mean (3.25), which is an indication that the bank required to improve its service in these areas.

4.1.3. Electronic Banking Service Quality Regarding Fulfillment

Fulfillment is the ability to perform the promised service dependably and accurately. This relates to the ability to provide a service as expected by customers in terms of speed (how quick the Transaction is performed), accuracy (how correct the transaction is in terms of money withdrawn) and if the equipment is operational 24 hours as expected.

Table 4.3: Perception regarding electronic banking service quality regarding Fulfillment

Indicators	Mean	STD
Records at bank's mobile banking services are always accurate	3.99	0.73
The bank's mobile banking services delivers services when promised.	3.88	0.79
Bank's internet banking makes accurate promises about delivery of service	3.83	0.85
When the internet banking section promises to do something by a certain time, it does so.	3.76	0.93
Bank's internet banking services promptly informs about important situations (payments, balance and etc.)	3.80	0.79
The bank's ATM service completes a task accurately.	3.85	0.87
I have confidence on the bank's ATM services.	3.90	0.68
Overall, the bank electronic banking channel makes accurate promises about the services being delivered.	3.81	0.74
Grand Mean	**3.85**	**0.79**

As indicated on the table 4.3, the grand mean response for electronic banking service quality regarding fulfillment is 3.85, which is high according to Shrestha (2015) interpretation guide. This indicate electronic banking service quality regarding fulfillment is high. In terms of individual item statement whether customers feel safe when they used ATM service, got the highest mean (3.66); followed by statement whether customers have confidence on the bank's ATM services, which got mean (3.90). On other hands, item for "when the internet banking section promises to do something by a certain time, it does so", got lowest mean (3.72). In general, the mean value for all items for measuring fulfillment has greater than 3.7, which is considered high, indicating that the bank electronic banking is high fulfillment according the bank customers perception.

4.1.4. Electronic Banking Service Quality Regarding Privacy and Security

Privacy means that personal information is not shared and that credit or debit card information is secured (Sakhaei et al., 2014). In the context of electronic banking safety refers to security technology and customer's trust of the service (Damien & Matthew, 2003). As indicated on table 4.4, the grand mean response for the electronic banking service quality regarding privacy and security is 3.58, which is high according to Shrestha (2015) interpretation guide. This indicate the electronic banking service quality regarding privacy and security is high.

Table 4.4: Perception regarding electronic banking service quality regarding privacy

Indicators	Mean	STD
I feel safe in bank's mobile banking transactions	3.63	1.05
The bank's mobile banking services protects information about the sensitive user information	3.61	1.02
I feel safe in bank's internet banking transactions	3.52	1.04
The bank website is completely secure for user information	3.63	0.97
I feel safe when I using ATM service.	3.64	0.94
Pin of all e-banking service is secure.	3.60	1.06
The bank confidentially collects and maintains personal information of customers.	3.58	0.97
The bank does not share the personal information with other sites.	3.49	1.02
Overall, I am confident of the security of overall e-banking service of the bank.	3.49	0.95
Grand Mean	**3.58**	**1.0**

In terms of individual item statement whether customers feel safe when they used ATM service, got the highest mean (3.64); followed by statement whether customer feel safe in bank's mobile banking transactions, which got mean (3.63). On other hands, statement whether the bank does not share the personal information with other sites, got lowest mean (3.49). In general, the mean value for all items for measuring security and privacy of electronic banking are greater than 3.4 which is considered high, indicating that the privacy and security of electronic banking is well maintained.

4.1.5. Electronic Banking Service Quality Regarding Ease of Use

The ease of use has been found to have a strong influence on the use of electronic banking services (Raza, 2017). User-friendly website (such as webpage design with appropriate graphical user interface and navigational tools) is important in making customers feel more "ease to use".

Table 4.5: Perception regarding electronic banking service quality regarding ease of use

Indicators	Mean	STD
Mobile banking information contents and texts are easy to understand.	3.77	0.55
Mobile banking doesn't demand a lot of effort.	3.73	0.63
Nib bank internet banking is user friendly.	3.61	0.69
Nib bank internet banking application is easy to use.	3.66	0.88
Internet banking is funny to use.	3.64	0.87
The instructions on ATM services are clear.	3.78	0.76
Overall, the interaction with my bank's electronic banking application is clear and understandable.	3.73	0.91
Grand Mean	**3.70**	**0.75**

Source, (Survey data, 2023)

As indicated on the table 4.5, the grand mean response for the electronic banking service quality regarding ease of use is 3.7, which is high according to Shrestha (2015) interpretation guide. This indicate the electronic banking service is easy to use according to the respondent perception. In terms of individual item statement whether the instructions

on ATM services are clear, got the highest mean (3.78); followed by statement whether mobile banking information contents and texts are easy to understand, which got mean (3.77). On other hands, statement whether the Whether Nib bank internet banking is user friendly, got relatively low mean (3.61). In general, the mean value for all items used for assessing the ease of use of electronic banking is higher than 3.6, which is regarded as a high, indicating that, on overall, using electronic banking is simple.

4.1.6. Electronic Banking Service Quality Regarding Recovery Services

Recovery services refers to a company's response to a service failure to ease dissatisfaction and eventually retain customers. E-recovery refers to the company's reaction to service failures to allay dissatisfaction and ultimately retain customers. Companies need to find ways to make dissatisfied customers happy (Miller, et al, 2000). A study of literature suggests that e-recovery is influenced by three factors: response, compensation, and contact.

Table 4.6: Perception of Respondent regarding recovery services quality

Indicators	Mean	STD
Responsiveness	3.77	0.55
The bank's promptly responds to the requests and questions related with its E-Banking Services which made by e-mail or other channels.	3.27	1.07
The bank's E-Banking Services tells what to do if the transaction is not processed	3.30	1.08
The bank's E-Banking Services takes care of problems promptly.	3.39	1.03
Quickly resolves electronic banking transaction problems.	3.29	1.07
Mean	**3.31**	**1.06**
Compensation		
The bank's E-Banking Services compensates for problems it creates	3.50	1.03
The bank's E-Banking Services compensates when the transactions are not completed on time	3.40	1.01
Mean	**3.45**	**1.01**
Contact		
The bank's E-Banking Services provides a telephone number to reach branches	3.46	0.83
The bank's E-Banking Services has customer service representatives available online as a helpdesk	3.45	0.85
The bank's E-Banking Services facilitates to speak and clarify problem with an official.	3.34	0.86
Mean	**3.42**	**0.84**
Grand Mean	**3.39**	**0.97**

Source: (Survey data, 2023)

As indicated in table 4.6, the overall grand mean score for recovery service quality is 3.42 which is considered moderate. This is an indication that the bank e-recovery recovery service is found to be at an average level, indicating that substantial improvement is needed in responsiveness, compensation, and contact services. From the three sub dimensions: compensation has got the highest grand mean score of (M=3.45 with SD=1.01), which is considered moderate. Responsiveness is a major variable, which can be used to evaluate service quality of banks. Accordingly, as indicated in the mean value,

the result demonstrates that the responsiveness, compensation (M=3.31, SD=1.06) and contact (M=3.34, SD=0.84 of the bank recovery services are found to be at an average level.

4.2. Level of Customer Satisfaction

The second specific objective of the study was to determine the level of customer satisfaction towards electronic banking services quality. When performance matches or exceeds customer expectations for service, they are satisfied. If not, they are not satisfied (Rahman, et al. 2012).

Table 4.7 presents level of satisfaction associated with electronic banking; ATM transaction, Mobile banking and Internet Banking. Data related with customer satisfaction revealed that majority of respondents rated the ATM services as excellent, very good and good.

Table 4.7: - Satisfaction on E-Channel Services

E-banking Channel	Criteria	Excellent	Very Good	Good	Not Good	Very Low
Mobile Banking	Ease of navigation	28.0%	25.2%	19.6%	15.9%	11.2 %
	Range of features	19.6%	25%	27.7%	16.1%	11.6 %
	Security	30.5%	24.8%	20.0%	19%	5.7 %
	limitations on transaction amount	20.20%	24.2%	27.3%	22.2%	6.1 %
Internet Banking	Ease of navigation	18.8%	25%	25.0%	20.8%	10.4 %
	Range of features	17.8%	20%	35.5%	17.8%	8.9 %
	Security	31.1%	28.9%	17.8%	11.1%	11.1 %
	limitations on transaction amount	28.60%	7.10%	26.2%	26.2%	11.9 %
ATM	Cash availability on ATM	28.1%	26.1%	32.7%	11.1%	2 %
	Neatness of money in ATM	29.1%	28.5%	2.8%	13.3%	3.3 %
	ATM uptime	15.4%	21.6%	36.9%	22.1%	4 %
	Security of ATM location	23%	31.7%	28.4%	16.2%	0.7 %
	Proximity (closeness) of ATMs	21.6%	16.2%	30.4%	21.0%	10.8 %

Source: (Own Survey 2023)

However, significant number of respondents also indicated their concerns on e-channel service. For instance, 31.8% were not happy with proximity of ATMs at their surroundings, 26.8% of them rated ATM Up time as not good and very low; 16.9% not satisfied with Security of ATM location, and 12.5% were not satisfied with regard to cash availability in ATM.

Like that of ATMs, smartphones and internet are also giving consumers more options. When we come to NIB mobile and internet banking service in general customer's response was good. However, good is not enough with this competing banking industry in Ethiopia. For instance, 28.1% of customers said it is not easy to navigate and requires long steps to execute one query. Likewise, 31.2% of customers said it is not easy to navigate via internet banking. Hence, it is advisable to shorten the time or the process it takes, or need to introduce application rather than USSD payment. In addition, when it comes to range of feature on mobile banking 27.7% of respondents are not satisfied with range of feature on mobile banking and internet banking saying it lacks different utility payment and language options. More so, 28.3% and 37.1% respondents are not satisfied with limitations on transaction amount on mobile banking and internet banking, respectively. Furthermore, 24.7% and 22.2% respondents are not satisfied with security of mobile banking and internet banking, respectively. Finally, respondents were asked to rate their overall satisfaction level about the Nib Bank electronic banking services and the result is illustrated in table 4.8.

Table 4.8: E-Banking Customers Overall Satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent	Mean	SD
Overall, my feeling about the NIB Bank Electronic Banking services quality can be best described as:	Highly dissatisfied	10	5.5	5.5	5.5	**3.37**	**1.07**
	Dissatisfied	18	9.9	9.9	15.4		
	Neutral	72	39.6	39.6	54.9		
	Satisfied	59	32.4	32.4	87.4		
	Highly satisfied	23	12.6	12.6	100.0		
	Total	182	100.0	100.0			

Source: (Own Survey, 2023)

4.2. Correlation Results

The third specific objective of the study was aimed examine the relationship between electronic banking services quality and customer satisfaction in Nib Bank. The findings of the study are presented in Table 4.9. The result shows that there are positive and high correlation between all e-banking service quality dimensions (efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service) and customer satisfaction.

Table 4.9: Pearson Correlation Service quality dimensions and customers satisfaction

		Customer satisfaction
Efficiency	Pearson Correlation	.656**
	Sig. (2-tailed)	.000

System availability	Pearson Correlation	.660**
	Sig. (2-tailed)	.000
Fulfillment	Pearson Correlation	.611**
	Sig. (2-tailed)	.000
Privacy and security	Pearson Correlation	.767**
	Sig. (2-tailed)	.000
Ease of use	Pearson Correlation	.689**
	Sig. (2-tailed)	.000
Recovery Service	Pearson Correlation	.705**
	Sig. (2-tailed)	.000
Customer satisfaction	Pearson Correlation	1
	Sig. (2-tailed)	

**. Correlation is significant at the 0.01 level (2-tailed). Source: (Survey data, 2023)

The results show that privacy & security as e-banking service quality dimension was positively correlated to customer satisfaction with a Pearson's Correlation Coefficient of r = 0.767 and at level of significance of 0.000. This relationship was high according to Marczyk, et al. (2005) interpretation. The results also revealed that there is a high and positive correlation between recovery service and customer satisfaction with a Pearson's Correlation Coefficient of r = 0.705. More so, the results also revealed that there is a high and positive relationship between Ease of use, system availability, efficiency and fulfilment and customer satisfaction with a Pearson's Correlation Coefficient of r = 0.689, r = 0.660, r = 0.650 and r = 0.611, respectively, which are considered high in all cases according to Marczyk, et al. (2005) interpretation.

Over all, all six electronic banking service quality dimensions (efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service) are high correlation with customer satisfaction with a Pearson's Correlation Coefficient of r > 0.6 in all case. This indicates that electronic banking service quality dimensions had a positive and high correlation with the customers satisfaction.

4.3. Analysis of Regression Results

The fourth specific objective of study was to examine the effect electronic banking services quality on customer satisfaction in Nib Bank. This was done through regression analysis. Multiple linear regressions are based on the assumptions of Ordinary Least Square (OLS).

4.3.1. The Model Summary (Multiple Coefficient of Determination R^2)

As indicated in the above table 4.10 R has a value of 0.890, representing the simple correlation between the six independent variables (efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service) and customers satisfaction at Nib Bank electronic banking service.

Table 4.10: Model Summary for service quality and the customers' satisfaction [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.890[a]	.792	.785	1.26488	2.206

a. Predictors: (Constant), Recovery Service, Efficiency, System availability, Fulfillment, Ease of use, Privacy and security
b. Dependent Variable: Customer satisfaction

R^2 on the other hand explains the percentage of variation in customers satisfaction at Nib Bank electronic banking service that is explained by the six electronic banking service quality dimensions. The value of adjusted R^2 is 0.785 tells that the six electronic banking service quality dimensions can account for 78.5% of the variation in the overall customers satisfaction at Nib Bank electronic banking service. This means having efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service in electronic banking service in bank are the factors that created the 78.5% of the variance on customers satisfaction at Nib Bank electronic banking service. The remaining 21.5% of the variability in customers' satisfaction is left unexplained by the explanatory variables used in the study.

4.3.2. ANOVA Interpretation

The result in ANOVA Table 4.11 shows that the sum of squares of the regression is 1066.965 at 6 degrees of freedom and a mean square of regression is 177.828. The residual sum of squares is 279.985 with 175 degrees of freedom and residual mean square value of 1.600. The test for the joint significant, which is given by the F statistic is 111.148, it is statistically significant at 0.00. This imply that the six independent variables, that are efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service, considered were relevant in explaining the customers satisfaction in Nib Bank electronic banking service.

Table 4.11: ANOVA for E-banking service quality and the customers' satisfaction [a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1066.965	6	177.828	111.148	.000[b]
	Residual	279.985	175	1.600		
	Total	1346.951	181			

a. Dependent Variable: Customer satisfaction

b. Predictors: (Constant), Recovery Service, Efficiency, System availability, Fulfillment, Ease of use, Privacy and security

4.3.3. Regression Coefficients

The findings in Table 4.12 show the coefficients of the regression. According to the findings, all six independent variables, that are efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service that are considered in this study are significant in predicting the customers satisfaction in Nib Bank electronic banking service since the p values are less than 0.05.

Efficiency has positive and significant effect on the customers satisfaction in electronic banking service of Nib Bank with a beta value (beta =.291) and t value of 6.588 which is significant. Similarly, system availability has also positive and significant effect on customers satisfaction in electronic banking service of Nib Bank with a beta value (beta =.195) and t value of 4.592 which is also statistically significant. Fulfilment as one dimension of e-banking service quality has also positive and significant effect on

customers satisfaction in electronic banking service of Nib Bank with a beta value (beta =.186) and t value of 2.592 which is also statistically significant.

Table 4.12: Coefficients for E-Banking service quality and the customers' satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.924	.691		-7.125	.000
	Efficiency	.291	.044	.271	6.588	.000
	System availability	.195	.042	.206	4.592	.000
	Fulfillment	.186	.072	.119	2.592	.010
	Privacy & security	.191	.033	.301	5.863	.000
	Ease of use	.095	.040	.119	2.383	.018
	Recovery Service	.144	.058	.132	2.484	.014

a. Dependent Variable: customer satisfaction

Source: (Own Survey, 2023)

Privacy & security has also positive and significant effect on customers satisfaction in electronic banking service of Nib Bank with a beta value (beta =.191) and t value of 5.863 which is also statistically significant at 0.00. Ease of use has also significant influence customers satisfaction in electronic banking service of Nib Bank with a beta value (beta =.095) and t value of 2.383 which is also statistically significant at 0.018. Lastly, recovery service has significant influence customers satisfaction in electronic banking service of Nib Bank with a beta value (beta =.144) and t value of 2.484 which is also statistically significant at 0.014.

4.4. Discussion of Findings

The study has mainly an objective to examine the effect of electronic banking service quality on customers satisfaction at Nib International Bank. The electronic banking service quality was measured using six dimensions (efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service). The outcome of the regression was also analyzed with the predicted hypothesis (see section 2.3). In line with the finding of from the above regression results, the result of the summary of hypotheses are shows in the table 4.13 below.

Table 4.13: Summary of Hypothesis Test

Hypothesis	T	Sig.	Decision	Remarks
Alternate (H1): Efficiency of electronic banking service has positive effect on customer satisfaction.	6.588	.000	Accepted	Its Sig. value is less than 0.05
Alternate (H2): System availability	4.592	.000	Accepted	Its Sig. value is

of electronic banking service has positive effect on customer satisfaction.				less than 0.05
Alternate (H3): Fulfilment of electronic banking service has positive effect on customer satisfaction.	2.592	.010	Accepted	Its Sig. value is less than 0.05
Alternate (H4): Privacy & security of electronic banking service has positive effect on customer satisfaction.	5.863	.000	Accepted	Its Sig. value is less than 0.05
Alternate (H5): Ease of use of electronic banking service has positive effect on customer satisfaction.	2.383	.018	Accepted	Its Sig. value is less than 0.05
Alternate (H6): Recovery service of electronic banking services have positive effect on customer satisfaction.	2.484	.014	Accepted	Its Sig. value is less than 0.05

Source: (Own Survey, 2023)

The results depicted overall regression model was found significant valid and fit. The statistical significance of each independent variables (electronic banking services quality dimensions) in explaining satisfaction of customer in electronic banking service of Nib Bank is captured throughout the p-values. The values of regression coefficients for all electronic banking service quality dimension i.e., efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service had significant positive effect on actual customer satisfaction in electronic banking service of Nib Bank. The result of the study is consistent with the previous studies (Zhang et al, 2011; Sohrabi et al, 2012).

5. CONCLUSION & RECOMMENDATION

5.1 Conclusion

The study was undertaken to examine the effect of electronic banking service quality on customers satisfaction at Nib International Bank. It can be concluded electronic banking service quality has significant effect on customers satisfaction at Nib International Bank. All six electronic banking service quality dimensions that are considered in this study, namely: efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service positively and significantly influence satisfaction of customers of Nib Bank. The improvement of these electronic banking service quality dimensions has a higher potential of improving level of customers satisfaction of Nib Bank. Thus, it can be concluded that high electronic banking service quality is an increasingly important tools to guarantee higher customer satisfaction. From this point of view, obtaining specific knowledge about these areas for the electronic banking service of Nib Bank that show differences with regard to the client they serve, the services they offer, and the cultural context from which the company generates its customers would create more satisfying outcomes in quality efforts.

5.2 Recommendation

Although the electronic banking service quality dimensions (i.e., efficiency, system availability, fulfilment, privacy & security, ease of use and recovery service) are considered very preliminary predictor of the customer satisfaction, but still have a strong impact on the satisfaction of customer of electronic banking of Nib Bank. Therefore, these factors must be incorporated in the company as a core strategy that is aiming at enhancing customer satisfaction. Moreover, during resource allocation, it is recommended that more emphasis should be put on the efficiency, system availability, privacy & security, and recovery service dimension because they portray a higher impact on customer satisfaction. It is apparent that electronic banking section of Nib Bank make assessment and monitoring service quality periodically to enable the bank to identify where improvements are needed from the customers' viewpoint. In turn, it helps to place emphasis on the underlying dimensions of electronic banking service quality. The bank managers should exert their maximum effort to improve quality of their electronic banking services through periodical quality assessment.

5.3 Further Research Suggestions

First, this study is slightly limited since it was only carried out in the electronic banking service of Nib Bank; hence, the projected findings cannot be generalized for all of the bank institutions within Ethiopia and outsides. Because of this factor, future studies should consider analysis from other banks in various parts of Ethiopia and cut across several aspects, including larger sample size and enhanced demographic characteristics. Second, this study never made any substantial comparison of customer and the bank staff perceptions regarding service quality. Future researchers should attempt to define any customer rating disparities towards service quality and those ratings from bank staff. This factor will enable bank management to develop other effective strategies that enhance customer satisfaction. Furthermore, the study focused on effect of electronic banking services quality dimensions precisely looking at customers' satisfaction only, the study however suggests that further studies should be done on its effect on other factors, such as customers loyalty.

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