Innovations

A study of customer loyalty with ATM banking in commercial bank of Ethiopia

[1]Sintayehu Ermias Lolemo and [2]Dr. Hemal B. Pandya

[1] Ph.D. Research scholar, Gujarat university,
Ahmedabad, Gujarat, India
[2] Professor, Gujarat university
Ahmedabad, Gujarat, India
Corresponding author: **Sintayehu Ermias Lolemo**

Abstract

Problem statement*: People do not believe that they can go and collect money without talking to anybody: hence, instead of using ATMs, they prefer to go to bank premises to get the service* ***Research design****: In this research qualitative and quantitative research designs were used for structured and unstructured questions respectively to address the research's objective. ATMs (Automated Teller Machines) were introduced to automate banking operations and create a competitive advantage in the banking industry.* ***Methodology****: The sources of data for this study were primary and secondary data and primary data was collected via means of the usage of survey method. The total population of this study was 13,218 and the sample size was 388 customers. The collected data was analyzed via means the use of descriptive statistics, correlation analysis, and multiple regressions. The finding was revealed how much of customers were unswerving with ATM offerings from their bank ATM s. All ATM carrier excellent attributes related to technology changed into perceived, and service quality attributes associated with technology were perceived, and all attributes related to employee overall performance and management capability changed into perceived.* ***Research Approach****: This research focused on describing the current situation of the problem from the literature review and statement of the problem.* ***Findings****: The results of the survey show that more than half of the respondents had a significant impact on customer loyalty. In general, the attributes of the reliability and reliability dimensions that are perceived as superior performance are closely related to the performance of ATM technology, while the attributes related to responsiveness are perceived as not particularly good related to personal and administrative functions.* ***Conclusion****: All the SQ attributes adopted from empirical research are valid attributes of ATM SQ and all the five SQ dimensions are significantly associated with customer loyalty. Service quality performance under responsiveness dimension performing the least among the other service quality dimension. ATM banking performed the lowest in ATMs not out of order, employee effectiveness in solving ATM problem, employee speed in responding to ATM problems, returning fast swallowed cards, quick replacement of lost cards, accessibility of employee to solve ATM problems, easy access to ATMs, accessibility of wide range of service and number of ATMs per station.*

Keywords: *1.Service quality, 2.Point of sale, 3.electronic banking, 4.Personal identification number, 5.Relation officer, 6.Automated teller machine*

1: Introduction

1.1. Background of research

Ethiopia's Commercial Bank was founded in 1963 and is the first bank in Ethiopia. When we introduced our own ATM system in 2002, the country introduced the latest banking system (ATM service for local users). Overall, with the wings of the government, CBE (Commercial Bank of Ethiopia) plays a catalytic role in the economic development and development of the country's
The ATM was introduced with the view to automate the operations of the banks and thus reduce the need for bank tellers and overall reduce costs. Charges introduced with ATM banking services are also seen as a means of increasing profits for the banks.

The banking sector is a customer-oriented service where customers are the focus. Therefore, research is needed in this sector to understand more on customers` need and their attitudes to build a long-term relationship with banks.
The idea behind the ATM was to automate the duties of a bank teller which subsequently removed the face-to-face interaction between the customer and the bank teller. The customer uses plastic cards with magnetic strips to access their bank accounts. The identity of the customer is verified by them entering their personal identification number (PIN) upon request by the ATM. Upon verification, the customer is then able to gain access to the main computer at the bank via the communication link for the transaction to be completed. ATMs may either be on-premises or off-premises in their location.

1.2. ATM in Ethiopia

Automated teller machine (ATM) banking is the second popular access channel to banking services behind branch banking in Ethiopia which offers competitive advantage in the homogeneous market of retail banking products and services. The introduction and use of ATM system of banking has received different perception.
One of the views is that it may not have really created customer satisfaction for bank clients, and the other is that it may have, despite all the merits of the ATMs, customers still complain of shortfalls in the use of the system. The impact of the Automated Teller Machine cannot be ignored if meaningful goals and objectives are expected to be achieved.

Cash machines are new to Ethiopia, but their number is growing quickly, with banks eager to ease access for their customers. However, despite the bank’s effort to improve access for its customers by increasing the number of machines, ATM users are still feeling the brunt of the consequence of unreliable service Fortune.

1.3. Problem statement

In bringing up ATM technology, banks portrayed the use of ATMs to be superior in the delivery of service as compared to the use of cashiers. Looking at the many queues that characterize the premises of several banks sometimes, it may be inferred that the quality-of-service delivery using these ATMs may be affected and hence the need to look at the effectiveness of this technology.

There are also some instances when customers would prefer to queue up in the bank even when the ATMs are operational, and no customers are in sight using the facility. People do not believe that they can go and collect money without talking to anybody: hence, instead of using ATMs, they prefer to go to bank premises to get the service.

1.4. Research Hypotheses

From the research questions, we formulated the following hypotheses:
Ho1: There is no significance relationship between ATM banking service quality attributes and customer loyalty in commercial bank of Ethiopia.
Ho2: There is no significance relationship between ATM banking service quality dimensions and customer loyalty in Commercial bank of Ethiopia.
Ho3: There is no significance relationship between ATM offering level of service quality customer expects and other modes of accessing banking services in Commercial bank of Ethiopia.
Ho4: There is no significance relationship between Customer satisfaction and customer loyalty in Commercial bank of Ethiopia.
Ho5: There is no significance relationship between Customer satisfaction and customer loyalty in Commercial bank of Ethiopia
Ho6: There is no meaningful relationship between customer loyalty and customer unswerving in the Commercial bank of Ethiopia.

1.5. Research Objectives

The general objective of this study was to study customer loyalty on automated teller machine (ATM) banking system on Ethiopia.

This research had the following specific objectives to evaluate the effectiveness of the ATM in terms of the following.
I. To measure customers' loyalty with ATM banking in commercial banks. of Ethiopia.
ii. To identify problems associated and areas that need improvement in ATM banking.
iii. To offer valuable suggestions to improve service quality and make ATM banking the preferred channel to access banking services.
iv. And to what extent do those SQ dimensions perceived by customer effects customer loyalty in banking service?

1.6. The significance of the study

This research will have the following significances.
I. The customer will benefit in terms of improved service and reduced time spent at the bank branches resulting in customer loyalty and customer confidence in the banking sector.
ii. Banks will formulate strategies and policies in terms of future investment in this type of technology as well as in trying to improve the quality of service to be given to customers as well as reducing costs.

1.7. Scope of the research

This study was restricted to the commercial bank of Ethiopia which is one of the large concentrations of ATMs (Automated Teller Machines) and focused on those branches with a reasonable number of cardholders fairly present the card holder population in the country.

1.8. Limitation of the study

Sampling issue researcher select only commercial bank of Ethiopia purposively, but this commercial bank is not the only bank to provide ATM banking service in Ethiopia; there are other private banks provides ATM banking service

Ethiopia. As a result, the analytical results presented here may have limited generalizability and care should be taken when generalizing the findings of this study.

2: Literature review

Different researchers used different types of methodologies techniques, and sample sizes and found various findings in the world on customer loyalty and customer satisfaction.

No	Author name	Topic	Methodology and Techniques	Study area	Sample size	Findings
1	Vinita kaurach.s.Durgaprasedsourabhsharma	Service quality, service convenience, price & fairness, customer loyalty &the mediating role of customer satisfaction	-By quota & Purposive-sampling -Exploratory factor analysis	India	-486 customers both from private & public banks	-customer satisfaction is found to be a mediating variable between its antecedents and customer loyalty
2	WahidurRahmn	Customer satisfaction toward private and public commercial banks in Bangladesh	-simple random sampling -co-relational research -Self-administered questionnaire	Bangladesh	-100 respondents	-customer planning to switch to a new bank is that the new bank provides a greater variety of bank products.
3	A.vasumath&R.Subashin	The influence of SERVQUAL dimensions on customer loyalty in the banking sector, India.	-Descriptive type of research -data collected by questionnaire	India	-250 customers from five branches of scheduled bank.	-Many customers were not happy with the conduct of staff members and the communication service rendered by the bank. -The number of times transacting in ATM depends on the annual income of the customers than age and occupation of the customers,
4	Patricia W.Chuani	Determinants of customer retention in Kenya commercial banks.	-Descriptive research design -stratified random sampling technique -Data analyzed by SPSS vs 23	Kenya	-138 respondents	-The higher the customer service quality levels the higher the retention rate for KCB customers.
5	Ala EddinMahdkhalaf Ahmad	E-banking	-Purposive	Jordan	-185	-Factors pertaining to accessibility,

		functionality and outcomes of customer satisfaction.	sampling technique. Questionnaire design		respondents	convenience, security, privacy, content, design, speed, fees, and charges were a focus of this study as they have an influence on customer satisfaction.
6	Mst.ShulyAktar	The impact of service quality on client satisfaction.	-Descriptive research design -By convenient sampling method -Face to face interview -Data analyzed by SPSS	Bangladesh	-300 respondents	-Many clients are unsatisfied with the bank's physical facilities and seating arrangements, as well as a shortage of ATM booths, slow service, and lack of personalized attention.
7	Aronu.Co	Determining the equality of customer loyalty between two commercial banks in Anambra, Nigeria	-Data collected by questionnaire -Data was randomly selected	Nigeria	-721 customers	-There is no significant difference between customer loyalty of the two commercial banks.
8	TewodrosBiset Amen and DebelaBonsaButa	Factors affecting customers satisfaction towards the use of automated teller machines (ATM)	-Qualitative research -By semi-structured questionnaire -Descriptive analysis	Ethiopia	-200 respondents	Responsiveness, efficiency, appearance, reliability, and convenience of ATM have a significant and positive influence on customer's satisfaction.
9	YemisrachWondimu	The impact of ATM banking service quality on customer's satisfaction.	-Exploratory research design -Convenience sampling technique	Ethiopia	-400 customers	-The higher the ATM service quality, the higher the level of customer satisfaction. ("The Influence of ATM Service Quality on Customer Satisfaction in the ...")
10	Abera Habte	Assessment of customer's satisfaction on ATM service commercial bank of Ethiopia.	-Non-probability sampling	Ethiopia	-271 customers	-There is bank should solve the problem which the case of errors during transaction give immediately response, provide receipt from the ATM service on the financial transaction.
11	BenyamDejene	Factors	-Causal	Ethiopia	-297	

		affecting customer attitude toward ATM service in commercial bank of Ethiopia.	research design		customers	-ATM perception, perceived usefulness, service satisfaction, and ease of use positivelyimpactedcustomerattitudestoward ATM use.

3: Methodology

3.1. Introduction

This chapter gives an outline of the research approach and methodology that was used in the study. The source of data required for conducting the study, sampling technique employed, method of data collection and analysis was presented in these sections. Moreover, the statistical method (SPSS) was used to analyze the data and statistical model employed for presentation of the quantitative result briefly discussed here in this chapter.

3.2. Research Approach

This research focused on describing the current situation of the problem from the literature review and statement of the problem.

The questioners developed to analyses the relationship between service qualities attributes and SQ dimension had with customer loyalty and assess the influence that these service quality dimensions had on customer'sloyalty. Descriptive and inferential analysis was used to answer research questions.

The questionnaires were distributed based on convenience basis and aimed to address those people believed to use ATM card for reasonable period that is more than one month. Purposive sampling was also used by targeting certain organization employees using their ATM card as salary payment and by assuming in a position to provide the needed data.

3.3. Target population and sample size

The study was carried out in Commercial bank of Ethiopia. It was also conducted through a survey of ATM users at the bank branches. Commercial bank of Ethiopia has 1284 branches that at distributed across the country. Currently it has more than 13 million customers in Ethiopia. From these more than 4.4 million customers were active ATM holders. 13218 active ATM users were covered in the targeted area of study.

The formula of Yamane is expressed as

Where n=required sample size
N=population
e=significance level

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

$$n = \frac{13218}{1+13218(0.05)2} = \mathbf{388}$$

3.4. Data sources and Data collection techniques

Primary and secondary data sources were used for the study:
Primary data was obtained by way of questionnaires that were both structured and open ended and these were distributed to the above-mentioned bank branches' ATM users believed to spend their time and genuinely fill the questionnaire. Observation and some discussion with ATM users were also conducted during various visits to ATMs stations.

Secondary data was obtained from news, print journals, magazines and the internet which includes searches from companies' websites and documentaries.

3.5. Questionnaire development and administration

The questionnaire items adopted from previous research which identifies ATM service quality attributes recommended by different researchers (Mwatsika, 2014). After the items are identified, the questionnaires are administered to the target population through personal contact by the researcher and their assistance. Convenience as well as judgment was used in the distribution of questionnaire to the ATM customers. Purposive sampling was also used to address those people that expected to use ATMs at least once a month and select those institutions with employees under their domain that would be able to provide the needed data. The number of questionnaires distributed to each branches' customer under study was proportionally that is based on the percentage of card holders from the target population.

3.6. Data Analysis Methods

Data was collected in a manner that made analysis easy. The statistical Package for Social Science (SPSS) version 20 was used for analysis of the variables under investigation. To develop the measurement scale, the study adopted 25 validated ATM SQ attributes from various empirical studies.

The participants were asked to rate the ATM SQ attributes on Likert scales of 1 to 7 where 1 was very poor, 2-somewhat poor, 3- Poor, 4- Neutral, 5- Good 6-somewhat good and 7-Very good on performance scale, respectively. The Cronbach's Alpha and KMO and Bartlett's Test can be used to measure scale reliability and sample adequacy to undertake the study.
Descriptive statistics, correlation analysis and multiple regressions are used to answer research questions.

4: Data Analysis and Findings

4.1. Reliability

The researcher started the data analysis by examining the reliability and validity of the sample data. The Cronbach Alpha score ranges from 0 to 1. George and Mallery (2003) provide the following rules of thumb: "_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and _ < .5 – Unacceptable" (p. 231).

Table 4.1: Reliability Statistics for all service quality attributes

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.817	.818	26

Source: Compiled by author from SPSS version 20 result, 2017

Table 4.2: Reliability statistics for service quality dimensions and customer loyalty

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.893	.894	6

Source: Compiled by author from version 20 result, 2017SPSS

Table 4.1 and 4.2 shows Cronbach's alpha coefficients for the study were 0.918 and 0.894, higher than benchmark of 0.70 of Cronbach's Alpha. These high Cronbach's alpha coefficients indicate that each construct had high internal consistency among the items measuring the constructs.

4.2. Validity test (KMO and Bartlett's test)

KMO measures sample adequacy of the study. It is said to be an acceptable measure if the KMO is.6 or higher value (Sharma 1996). As per (Table 4.2) KMO measure of sample adequacy for all variables is greater than .6 for all domains with a value of .793 for reliability, .716 for responsiveness, .606 for assurance, .675 for empathy and, .837 for tangibles.

From the KMO test, it can be concluded that the sample is adequate to measure as the KMO for all service quality dimension is above the recommended value.

Table 4.3: KMO and Bartlett's Test

Variables		
Reliability	KMO measure of Sampling Adequacy	.793
Responsiveness	KMO measure of Sampling Adequacy	.716
Assurance	KMO measure of Sampling Adequacy	.606
Empathy	KMO measure of Sampling Adequacy	.675
Tangibles	KMO measure of Sampling Adequacy	.837

Source: Compiled by author from SPSS version 20 result, 2017

Table 4.4 Demographics statistics

		Frequency	Percent	Valid Percent
Gender	Male	252	65	
	Female	136	35	
Total		388	100	
Age	18-30	233	60	
	31-40	113	29	
	41-50	35	9	
	>50	7	2	
Total		388	100	

Table 4.4 shows more than 90% of ATM users age ranges from age 21 - 40 and indicates that this banking channel more preferred by younger societal group. Hence, commercial banks need to do more to create awareness among society at different age groups.

4.3. Descriptive Data Analysis

Data obtained from the respondents using ATM card shown in a total of 388 respondents provided their opinion on perceived service quality and overall satisfaction.
Classification of service quality attributes in Table 4.2 to their respective dimension adopted from previous researchers (Mwatsika, 2014).

Table 4.5: Service quality attributes statistics

Service attributes	Mean	Std. Deviation	Number	Quality Dimension
User friendliness of ATM system	4.1636	.92847	388	Reliability
Speed of ATM operation	3.9393	.97265	388	Reliability
Cash availability in ATMs	3.6570	1.01758	388	Reliability
Accuracy of Transaction by ATMs	3.4828	1.16909	388	Reliability
ATMs not out of order	2.9947	1.05659	388	Reliability
Waiting times ATMs	3.9604	1.04198	388	Reliability
Employee effectiveness in solving ATM problem	3.0449	1.00822	388	Responsiveness
Employee speed in responding to ATM problems	3.1003	1.00025	388	Responsiveness
Returning fast swallowed cards	3.1557	1.01290	388	Responsiveness
Quick replacement of lost cards	2.5594	1.11200	388	Responsiveness
Uncomplicated way of applying for ATM cards	3.7388	.88661	388	Responsiveness
Bank employee's friendliness	3.5541	1.0686	388	Responsiveness
Advise on ATM usage and security	3.5567	1.14957	388	Assurance
Privacy when using ATMs	3.8259	1.12747	388	Assurance
Security at ATMs	3.8311	1.00685	388	Assurance
Fees charged	3.8918	.94640	388	Empathy
Convenient location	3.4776	1.11574	388	Empathy

Accessibility of employee to solve ATM problem	3.1451	1.07030	388	Empathy
Easy access to ATMs	3.3087	1.23751	388	Empathy
Cleanness of ATMs and ATM stations	3.8338	.89757	388	Tangible
Appearance of corporate branding on ATMs	3.5884	1.10049	388	Tangible
Issuing of clean or new notes	3.7361	1.08819	388	Tangible
Issuing of readable slips	3.2533	1.23409	388	Tangible
Accessibility of wide range of services	3.1583	1.21335	388	Tangible
Number of ATMs per station	2.8654	1.21731	388	Tangible
How happy are you with the ATM service that is provided by the banks?	3.670	.96742	388	

Source: Compiled by author from SPSS version 20 result, 2022

Table 4.5 shows user friendliness of ATMs, Speed of operations, cash availability, waiting times, easiness of process to apply for ATM cards, bank employee's friendliness, advise on ATM usage, privacy, security, fees charged, cleanness of ATM, appearance of corporate brand and issuing of clean notes had the highest mean of above 3.5.

ATM service quality had the lowest mean of less than 3.5 in accuracy of transaction by ATMs, ATMs not out of order, employee effectiveness in solving problems, employee speed in responding to ATM problems, returning fast swallowed cards, quick replacement of lost cards, convenient location, accessibility of employee to solve problem, easy access to ATMs, issuing of readable slips, accessibility of wide range of services and number of ATMs per station.

Table 4.6: Descriptive Statistics of Service Quality Dimensions

	Mean	Std. Deviation	N
Reliability	3.6996	.72831	388
Responsiveness	3.1922	.61966	388
Assurance	3.7379	.83001	388
Empathy	3.4558	.84017	388
Tangibles	3.4059	.80549	388
How happy are you with the ATM service that is provided by the banks?	3.6702	.96742	388

Source: Compiled by author from SPSS version 20 result, 2022

Descriptive statistics of Table 4.6 shows service quality attributes under reliability and assurance on average had the highest mean (3.7 and 3.738) respectively. Items under responsiveness dimension were perceived lowest (3.192).

Table 4.7: Rating of ATM attribute according to their perceived performance "good to Exceptionally good"

Item	Performing 'good to Very good'
User friendliness of ATM system	80.2%
Speed of ATM operation	75.2%
Cash availability in ATMs	61.8%
Accuracy of Transaction by ATMs	53.3%
ATMs not out of order	31.2%
Waiting times ATMs	74.2%
Employee effectiveness in solving ATM problem	39.0%
Employee speed in responding to ATM problems	37.5%
Returning fast swallowed cards	40. 7%
Quick replacement of lost cards	23.2%
Bank employee friendliness	61.7%
Uncomplicated way of applying for ATM cards	63.0%
Security at ATMs	70.7%
Advise on ATM usage and security	58.0%
Privacy when using ATMs	68.4%
Fees charged	67.0%
Convenient location	56.4%
Accessibility of employee to solve ATM problem	37.2%
Easy access to ATMs	49.3%
Cleanness of ATMs and ATM stations	74.4%
Appearance of corporate branding on ATMs	60.7%
Issuing of clean or new notes	72.8%
Issuing of readable slips	50.4%
Accessibility of wide range of services	43.8%
Number of ATMs per station	33.7%
Customer Satisfaction	68.6%

Source: Compiled by author from SPSS version 20 result, 2017

Table 4.7 shows performance rate of ATM SQ attributed to be performing 'good' to 'very good' by respondents. ATM services have been rated to perform extremely well in system usability by
80.2% of the respondents, speed of ATMs (75.2%), and waiting times ATMs (74.2%), security at ATMs (70.7%), cleanness of ATMs and ATM stations (74.4%) and issuing of clean or new notes (72.8%).

Performance ratings on average have been low in responsiveness (44.19%). The Bank is performing poorly in the provision of responsive ATM services. Employee effectiveness was rated good by only by 39% of the participants; employee speed in responding to ATM problem 37.5%, returning fast swallowed cards 40.7%, quick replacement of lost cards 23.2%, accessibility of employees to solve ATM problem 37.2%, easy access to ATMs 49.3%, accessibility of wide range services 43.8 and number of ATM per station 33.7% and all these attributes perceived low in performance relate to personnel and management decision making.

Table 4.8: Performance rating of service quality dimension "good to very good"

Service quality Dimension	Performance rate in % (Good to Very good)
Reliability	62.62
Responsiveness	44.19
Assurance	65.70
Empathy	52.50
Tangibles	55.98

Source: Compiled by author from SPSS version 20 result

As per (Table 4.8) when SQ dimensions are ranked based on average performance rating of all attributes in each dimension, assurance (65.7%) ranks first followed by reliability (62.2%), tangibles (55.98), empathy (52.2%) and lastly performing below average responsiveness (44.19).

4.4. Correlation Analysis

The interrelationships of perceived service quality dimensions in the study were also investigated through correlation analysis. This section involves answers to Research Question 2 and 3.

Table 4.9: Spearman Correlation between SQ Attributes and Customer Satisfaction

Item	ATM SQ performance correlation to customer satisfaction with ATM service	
	Spearman Correlation	Sig. (2-tailed)
User friendliness of ATM system	.374**	0.000
Speed of ATM operation	.502**	0.000
Cash availability in ATMs	.467**	0.000
Accuracy of Transaction by ATMs	.514**	0.000
ATMs not out of order	.470**	0.000
Waiting times ATMs	.471**	0.000
Employee effectiveness in solving ATM problem	.200**	0.000

Employee speed in responding to ATM problems	.234**	0.000
Returning fast swallowed cards	.208**	0.000
Quick replacement of lost cards	.380**	0.000
Bank employee friendliness	.275**	0.000
Uncomplicated way of applying for ATM cards	.551**	0.000
Security at ATMs	.642**	0.000
Advise on ATM usage and security	.426**	0.000
Privacy when using ATMs	.350**	0.000
Fees charged	.641**	0.000
Convenient location	.386**	0.000
Accessibility of employee to solve ATM problem	.628**	0.000
Easy access to ATMs	.530**	0.000
Cleanness of ATMs and ATM stations	.438**	0.000
Appearance of corporate branding on ATMs	.568**	0.000
Issuing of clean or new notes	.447**	0.000
Issuing of readable slips	.372**	0.000
Accessibility of wide range of services	.655**	0.000
Number of ATMs per station	.426**	0.000

**. Correlation is significant at the 0.01 level (2- tailed). List wise N= 388
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Compiled by author from SPSS version 20, 2022

Table 4.9 shows the correlation between all the predictor variables and dependent variables. The correlation analysis between ATM services loyalty and ATM SQ attributes shows that all
SQ attributes significantly correlate to customers' loyalty positively except four items under responsiveness dimensions. Notably fees charged, easy access to ATMs, privacy when using
ATMs, accessibility of wide range of services strongly and significantly correlate to ATM service loyalty. Under the responsiveness dimension only quick replacement of lost cards significantly correlates to customer loyalty. But, under responsiveness dimension, employee effectiveness in solving ATM related problems, employee speed in

responding to ATM problem, returning fast swallowed cards and bank employees friendliness correlates to other quality attributes which does not in itself correlate to customers' satisfaction.
From Table 4.9 it was concluded that Service quality attributes perceived by customers do have significant correlation with customer loyalty.

Table 4.10: Spearman correlation between service quality dimension and customer loyalty

	Customer Satisfaction	Reliability	Responsiveness	Assurance	Empathy	Tangibles
Customer Satisfaction	1.000	-	-	-	-	-
Reliability	.658	1.000	-	-	-	-
Responsiveness	.485	.515	1.000	-	-	-
Assurance	.655	.542	.482	1.000	-	-
Empathy	.671	.627	.432	.573	1.000	-
Tangibles	.672	.507	.371	.635	.595	1.000

**. Correlation is significant at the 0.01 level (2-tailed
Source: Compiled by author from SPSS version 20, 2022

Table 4.10 shows that all SQ dimensions significantly correlate to customer loyalty at varying degrees depending on the type of SQ attribute they contain. The highest correlation is between assurance, tangibles, and customer satisfaction (0.683); followed by reliability (.653) and empathy (.662). The weakest correlation is between responsiveness and customer satisfaction (.514). From the above table we can conclude that Service quality dimension perceived by customers does have significant correlation with customer loyalty.

Table 4.11: Regression Model Summary

Model	R	R Square	Adjusted R square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	Df1	Df2	Sig. F Change	
1	.802a	.643	.638	.58168	.643	134.514	5	373	.000	1.683

a. Predictors: (Constant), Tangibles, Responsiveness, Empathy, Reliability, Assurance
b. Dependent Variable: How loyal are you with ATM service that is provided by the banks?
Source: Compiled by author from SPPSS version 20, 2022

Table 4.12 ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	227.567	5	45.513	134.514	.000b
Residual	126.206	373	.338		
Total	353.773	378			

a. Dependent Variable: How loyal are you with ATM service that is provided by the banks?
b. Predictors: (Constant), Tangibles, Responsiveness, Empathy, Reliability, Assurance

Table 4.11 used to investigate the relationship between service quality dimensions (independent variables) and customer loyalty (Dependent variable). As per the regression result, the R value indicates 80.2% correlation between customer loyalty and five predictors and, also the adjusted R square of .638 indicates 63.8% of the variation in the dependent variable i.e., customer loyalty is explained by these five predictors (tangibles, reliability, assurance, empathy, and responsiveness); while the rest of 36.2% customer loyalty is influenced by other variables outside the variable under study.

As the regression result, the value of Durbin- Watson indicates 1.683 i.e., less than 2 meaning customer loyalty is positive auto correlation with five predictors (tangibles, responsiveness, empathy, reliability, and assurance) and, the larger F-value indicates positive auto correlation between customer loyalty and five predictors.

Table 4.12 shows the ANOVA test of the model which confirms customer loyalty as a function of service quality dimension used by the researcher. The result shows that the set of predictors is statistically significant at predicting customer loyalty at 0.01 level of significance. The results further support the research model, which shows service quality as an antecedent of customer loyalty.

Table 4.13: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.609	.182		-3.357	.001		
Reliability	.282	.058	.212	4.864	.000	.501	1.995
Responsiveness	.125	.061	.080	2.056	.040	.636	1.573
Assurance	.253	.056	.217	4.557	.000	.422	2.372
Empathy	.255	.050	.222	5.103	.000	.508	1.970
Tangibles	.297	.055	.247	5.380	.000	.453	2.206

a. Dependent Variable: Customer loyalty

Source: Compiled by author from SPPSS version 20, 2022

As per multiple regression coefficients result (Table 4.13), customer satisfaction is positively influenced by all service quality dimensions.

The table further helps us to assess the effect each predictor had on the customer loyalty. For example, in the B column for reliability the value .282 means that for every one-unit increase in the response to this question, loyalty increases by .282 units. From the above table tangible (.297) had the highest influence followed by reliability (.282). But responsiveness (.125) had the least influence on the customer loyalty compared to the other dimensions.

By using the B coefficients for all significant predictors, we can create a prediction equation to use for overall customer loyalty.

Customer loyalty = -.609 + (.282 × reliability + .125 × responsiveness + .253 × assurance + .255 × empathy + .297 × tangibles*)*

Moreover, Table 4.13 helps us to identify critical predictors that help to significantly improve customer loyalty.

From tables 4.11, 4.12 and 4.13 we can conclude that Service quality attributes perceived by customers do have significant influences on customer loyalty or offering quality service have positive impact on overall customer loyalty.

5: Conclusion and Recommendations

5.1. Conclusion

This study confirms that most of the respondents are loyal to bank ATM services.

All the SQ attributes adopted from empirical research are valid attributes of ATM SQ and all the five SQ dimensions are significantly associated with customer loyalty. The results have further found that service quality performance under responsiveness dimension performing the least among the other service quality dimension. ATM banking performed the lowest in ATMs not out of order, employee effectiveness in solving ATM problem, employee speed in responding to ATM problems, returning fast swallowed cards, quick replacement of lost cards, accessibility of employee to solve ATM problems, easy access to ATMs, accessibility of wide range of service and number of ATMs per station.

Most attributes perceived low in performance are related to personnel and management decision making. Competition in the banking industry is getting tough, and to create competitive advantage and customer loyalty only through ATM technology cannot bring the intended result, as it was in the early introduction of ATM to the market. Hence, banks to create competitive advantage and achieve more customer loyalty need to improve supporting service and managerial decision, working on those areas identified by the researcher as a weakness in ATM banking.

5.2. Recommendation

There is a need to improve ATM cards' application process, employee effectiveness and speed in handling ATM issues such as fast return of cards and quick replacement of lost cards and passwords. The bank should provide phone support to clients who experience service interruption, so users can get direct assistance. In addition, there should be a standby team equipped with a car that can be dispatched to any location where a customer faces convenience. There is a need to improve the communication link by the bank negotiating with Ethio-Tel Com to avoid interruptions which result in communication break between the ATM and main server resulting in failure to process the transaction accurately.

Most of the time ATMs and main servers result failure to process the transaction accurately. The bank should consider having staff specifically assigned to carry out routine checks with the customers to improve their response to queries as this is one area of concern. The quality of notes needs to be improved to avoid note jams in the ATMs. Hence, the bank should work hard to create awareness of the importance and convenience it brings for them, among the public at large, to increase ATM cardholders and should adopt a holistic strategy to promote ATM usage at the branches.

5.3. Future Research Area

The researcher assessed customer loyalty to ATM banking by focusing on only one bank.

Hence, it will be necessary to replicate this study on sample different private banks and in demographic characteristics such as having low levels of education and indifferent regions of the country, for comparison of the study results. This also would help in developing ATM banking as strategic access channel for bank products and services.

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