

The Effects of the use of ATM Banking Services on Customer Satisfaction in National Financial Credit (Nfc) Bank Bambili Branch

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Abstract

This research study was carried out to obtain the effects of the use of ATM banking services on customer satisfaction. Research on the use of ATM banking services on customer satisfaction remains unrepresented and is a growing area of interest.

It further offered a controversial topic that ATM holders could engage in to further make sense of the different negative and positive effects of ATM use that exist and how these directly influenced responses to gendered phenomena. It therefore elicited significant constructions of results and hence was used as a vehicle to further insight into the nature of awareness about the customer services offered by ATM points to account holders, effectiveness of ATM service on account holders and the relationships between ATM services and customer satisfaction.

This was achieved using a sample of 40 ATM users of National Financial Credit bank, Bambili branch. Through this method, the effect of the use of ATM banking services on customer satisfaction was analyzed.

Data was analyzed using STATA 10. The results were understood as almost three quarters of the respondents rated the services offered by an ATM to be effective with withdrawal as the main service offered by ATM, followed by checking of balances, while the statement/mini statement of account came third and Cash or cheque deposit came last. The finding further depicts that more than half of the respondents were satisfied by the services offered by the ATM.

This study sheds light on the awareness that ATM services results in customer satisfaction in the society and as a view point for banking industry by showing how quality services offered by ATM service points are essential and its relationship to customer satisfaction.

The researcher recommended that more inclusive study be made taking into consideration the disabled. A larger sample could also be carried out to see customer's perception concerning ATM banking services. The researcher also recommended that the bank should check the ATMs regularly to fix irregularities.

Keywords: ATM services • Banking services • Financial Credit • Customer satisfaction

Introduction

Background of the Study

Today's business environment is very dynamic and undergoes rapid changes as a result of technological innovation, increased awareness and demands from customers. Business organizations, especially the banking industry of the 21st century operates in a complex and competitive environment characterized by these changing conditions and highly unpredictable economic climate. Information and Communication Technology (ICT) is at the centre of this global change curve. Contend that managers cannot ignore Information Systems because they play a critical role in contemporary organization. They point out that the entire cash flow of most fortune 500 companies is linked to Information System.

Information and Communication Technology (ICT) is the automation of processes, controls and information production using computers, telecommunications, software's and other gadget that ensure smooth and efficient running of activities. It is a term that largely covers the coupling of electronic technology for the information needs of a business at all levels. ICT

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has surpassed the role of support services or only electronic data processing; its fields of applications are slightly global and unlimited. Its devices especially the Internet and modern computer email facilities have further strengthened early modernizations like the telephone and fax. Other ICT devices include data recognition equipment, factory automation hardware and services, telecomputing and teleconferences using real time and online system.

In the banking industry, e-services are revolutionizing the way business is conducted. Electronic based business models are replacing conventional banking system and most banks are rethinking business process designs and customer relationship management strategies. It is also known as e-banking, online banking which provides various alternative e-channels to using banking services that is ATM, credit card, debit card, internet banking, mobile banking, electronic fund transfer, electronic clearing services etc. However, as per Tanzanian e-banking scenario, ATM and mobile banking are most acknowledged than other e-channels.

Automated Teller Machine (ATM) refers to a machine that acts as a bank teller by receiving and issuing money to and from the ATM account holders/users (Singh, 2009). ATM means neither "avoids traveling with money" nor "any time money," but certainly implies both. ATM cards are fast replacing confounding withdrawal forms as a convenient way of getting your money from banks. In a way, they are rewriting the rules of financial transaction. A smart person no longer needs to carry a wallet-full of paper money; rather, what he/she needs to do is to fish out an Automated Teller Machine (ATM) card from his/her pocket, insert it in the slot of the machine, punch in a few details and go home with hard cash.

The history of ATM can be traced back to the 1960s, when John Shepherd-Barron who was managing director of De La Rue Instruments invented the first ATM machine. That machine was used by Barclays Bank in Enfield Town in North London, United Kingdom on 27 June 1967 [1].

The ATM is designed to perform the most important function of banks. The plastic card is replacing cheque, personal attendance of the customer, banking hour's restrictions and paper based verification. ATMs are used as springboard for Electronic Fund Transfer. ATM itself can provide information about customers account and also receive instructions from customers - ATM cardholders. An ATM is an Electronic Fund Transfer terminal capable of handling cash deposits, transfer between accounts, balance enquiries, cash withdrawals and pay bills.

In many parts of the world, most bank customers regularly use Automatic Teller Machines (ATMs) and today's western youth have not known a world without them. For them, the prevailing perception of a cash machine is that of a tool providing a familiar functionality of basic financial information and dispensing cash. The technology is hidden from sight; the computer is invisible. It has taken approximately 30 years to establish ATMs as ubiquitous examples of public walkup-and-use devices. The adoption has not been straightforward, requiring trust in the technology and willingness to modify behavioral strategies in the very sensitive domain of personal finance. Financial institutions have played a major, sometime coercive, role in encouraging ATM adoption. The ATM flourishes within societies where time is precious and money readily available. This culture is composed of individuals, who have personal bank accounts and access to a wide range of technology. For these individuals, ATMs are convenient and reliable everyday artifacts: push a few buttons and get the money. As ATMs cross-new borders and pervade different cultures, it is imperative to understand the role of cultural characteristics on people's perception of, attitudes towards and action on the machine. This understanding is instrumental in facilitating technology uptake and improving design localization, or the process of infusing a specific cultural context into products designed for different cultures [1].

In Africa, ATMs are being introduced for the first time and the new users must be understood who live within a culture which may bring new factors into the adoption curve. It concentrates on urban Africa, but the approach can be generalized to cover other public (and personal) technologies, as well as other developing markets.

African banking industry is witnessing unprecedented competition. To stay ahead, banks are coming up with a plethora of services to lure customers. Services like 24 hour banking, service at door step, telephone banking, internet banking, Extended Business Hours (EBH), speedy processing are only a few to mention. Greater part of today's bank transactions take place somewhere else other than in branch premises.

Because the aim of these services is to satisfy customers, there is a need to understand customer awareness, perception and importantly the level of satisfaction. Efforts are directed to attract and retain customers by offering them a basket of tailor made schemes supported by a state of the art distribution system (the ATMs). The whole exercise is helping banks to serve their customers fast and avoid human intervention totally. And for the customers, ATMs offer hassle-free cash withdrawal. No more fighting with the bank's teller for change and fresh notes. The total cash movement through ATMs in Africa is already between millions of francs (local currency) every year. In future, things are going to be even more different and challenging. The ATM has become a medium for non-cash transactions such as payment of bills, insurance payments, printing of statements or even accessing the internet.

Cameroonian banking sector has adopted the use of ATM in offering services. National Financial Credit (NFC) Bank Bambili branch introduced ATM services in 2016 and customers are accessing the service since then.

Methodology

Statement of the problem

The use of ATM is a new way of accessing banking services necessitated by customers' business needs and is enabled by fast changing technology like Internet. Due to achievements brought about by increased utilization of Information and Communication Technology (ICT) in the society, the banking industry has introduced ATM. ATMs provide a new method of dispensing

customer services which are expected to increase efficiency, sales performance and enhance customer satisfaction.

It costs the financial institution some money to set up and manage/maintain ATMs. It is therefore important for them to know if the service is perceived satisfactorily. If customers are not satisfied with the services offered by the ATMs, they will continue queuing up in the counters. This queuing up will later discourage the customers and the bank could lose her customers to other banks since the banking sector is very competitive.

In a nutshell, ATM is very important worldwide in that it facilitates provision of mini bank statement, cash withdrawal, cash deposit, transfer of funds from one account to another, balance enquiry, purchase of some utilities like electricity and fuel, bill payments and no need to carry a large amount of cash. The review of literatures suggests that most of the studies on the effect of ATM in providing bank services and customer satisfaction have been done in countries like USA, UK, Malaysia, Singapore, Finland and Australia. However, no sufficient work has been done in Cameroon with regards to ATM services and customer satisfaction issues. It is therefore against this background that the researcher was prompted to investigate and find out the effect of ATM services on customer` satisfaction in NFC Bambili Branch.

In NFC Bank Bambili branch, the ATM services were introduced in 2016 and it offers a convenient way for customers to avoid frustrating queues.

Research questions

- What are the effects of ATM services on customer satisfaction in NFC Bambili?

Specific questions

- What is the effect of security in use of ATM services on customer satisfaction in NFC Bank Bambili?
- What is the effect of time saving in use of ATM services in NFC Bank Bambili?
- What is the effect of convenience in the use of ATM services on customer satisfaction NFC bank Bambili?
- What is the effect of reliability in use of ATM services on customer satisfaction in NFC Bank Bambili?

Research objectives

- To determine the effects of ATM services on customer satisfaction in NFC Bank Bambili.

Specific objectives

- To examine the effect of security in use of ATM services on customer satisfaction in NFC Bank Bambili.
- To determine the effect of time saving in use of ATM services on customer satisfaction in NFC Bank Bambili.
- To examine the effect of convenience in the use of ATM services on customer satisfaction NFC bank Bambili.
- To analyze the effect of reliability in use of ATM services on customer satisfaction in NFC Bank Bambili.

Theoretical Literature

Theory of assimilation

Festinger's theory of dissonance (1957) forms the basis for the theory of assimilation. The theory of dissonance states that the consumer makes a sort of cognitive comparison between the expectations regarding the product and the product's perceived performance. If there is a discrepancy between expectations and the product's perceived performance, the dissonance will not fail to appear. This point of view on post-usage evaluation was introduced in

the literature discussing satisfaction under the form of the theory of assimilation [1].

According to Anderson, the consumers try to avoid dissonance by adjusting their perceptions of a certain product, to bring it closer to their expectations. In a similar way, the consumers can reduce the tension resulted from the discrepancy between expectations and the product's performance, both by distorting the expectations so that they could agree with the product's perceived performance and by increasing the level of satisfaction through minimizing the relative importance of experimental disconfirmation.

The theory presumes the consumers are motivated enough to adjust both their expectations and their product performance perceptions. If the consumers adjust their expectations or product performance perceptions, dissatisfaction would not be a result of the post-usage process. Consumers can reduce the tension resulting from a discrepancy between expectations and product/service performance either by distorting expectations so that they coincide with perceived product performance or by raising the level of satisfaction by minimizing the relative importance of the disconfirmation experienced (Olson & Dover, 1979). Some researchers have discovered that the control on the actual product performance can lead to a positive relationship between expectations and satisfaction.

The theory of contrast

This theory introduced by Hovland, Harvey & Sherif presents an alternative approach to the evaluation post-usage process that was presented in assimilation theory, in that post-usage evaluations lead to results in opposite predictions for the effects of expectations on satisfaction. Dawes defines contrast theory as the tendency to magnify the discrepancy between one's own attitudes and the attitudes represented by opinion statements. This approach states that whenever the customers experience disconfirmation, they try to minimize the discrepancy between their previous expectations and actual product/service performances, by shifting their evaluations away from expectations. While the theory of assimilation asserts that the consumers will try to minimize the expectation-performance discrepancy, the theory of contrast insists on a surprise effect that can lead to exaggerating the discrepancy.

According to the contrast theory, any discrepancy of experience from expectations will be exaggerated in the direction of discrepancy. If the firm raises expectations in his advertising and then a customer's experience is only slightly less than that promised, the product/service would be rejected as totally un-satisfactory. Vice-versa, under promising in marketing communications and over-delivering will cause positive disconfirmation also to be exaggerated.

Theory of reasoned action

The Theory of Reasoned Action (TRA) was proposed by Fishbein and Ajzen to explain and predict the people's behavior in a specific situation. TRA is a well-known model in the social psychology domain. According to TRA a person's actual behavior is driven by the intention to perform the behavior. Individual's attitude toward the behavior and subjective norms are the factors toward behavioral intention. Attitude is a person's positive or negative feeling and tendency towards an idea, behavior. Subjective norm is defined as an individual's perception of whether people important to the individual think the behavior should be performed. The Theory of Reasoned Action is a more general theory and has been applied to explain behavior beyond the adoption of technology. However, when applied to adoption behavior, the model includes four general concepts - behavioral attitudes, subjective norms, intention to use and actual use. The inclusion of subjective norm represents an important addition. In TRA, subjective norm is composed of the user's perception of how others think she should behave and her motivation to comply with the expectations of these referents. TRA has been applied in its original form to explain the adoption of ICT-applications. The TRA considers that the people behave in a rational way, evaluating what they have to lose and to win with the manifestation of their attitudes. So, ideas, personal goals, values, beliefs and attitudes influence the behavior they emit at work; if they believe, for example, that to share knowledge will bring those benefits, they will tend to be favorable to the sharing. The theory of reasoned action has already been widely researched and showed success in the prediction and

explanation of human behavior in a variety of areas. According to Davies F, et al. [2] for being so generalized and also for integrating various theoretical perspectives of psychology, before applied in researches of acceptance of information systems, the TRA should be perfectly appropriate for the study of the determinants of the use of the computer as an specific case. The theory of Reasoned Action is of significance to the study of the effects of ATM services on customer satisfaction. The theory examines the organizations' intentions or decisions to adopt ICT systems. This is an important process because before an organization benefits from ICT adoption a decision has to be made as to whether this is beneficial. Just as Davis F, et al. [2], postulates, the Theory of Reasoned Action is an essential instrument designed to measure the various perceptions that an individual may have of adopting an information technology innovation and the perceived impact on the organization. The theory therefore guides one in finding out the impact of ICT adoption on the financial performance of commercial banks in NFC bank.

Empirical framework

Earlier research by has recommended that some consumers have positive attitudes towards ATMs based on dominant perceptions of convenience, accessibility and ease of use. Recent advances in technology have also created a surge in technology-based self-service [3]. Literature related to customer satisfaction and ATM services are reviewed and explained under this section. This study investigated the moderating role of ambiguity in the process of customer satisfaction formation. It is found that product ambiguity moderates the way that expectation, performance and disconfirmation determine consumer satisfaction. When the product is ambiguous, consumer expectations have direct effects on consumer satisfaction as well as indirect effects through disconfirmation on the other hand, when the product is unambiguous or easy to evaluate, product performance has direct effect on consumer as well as indirect effect via disconfirmation.

Yi Y [4] in his study titled "A Critical Review of Consumer Satisfaction" stated that customer satisfaction is a collective outcome of perception, evaluation and psychological reactions to the consumption experience with a product and states that many studies found that customer satisfaction influences purchase intentions as well as post-purchase attitude and says in his book that a satisfied customer will recommend excellent products and services to their friends and help the enterprise to increase its market share and profitability.

Davies F, et al. [2] posited that the factors that influence customers' satisfaction on ATM services include costs involved and the efficient functioning of ATM.

Anderson EW and Sullivan MW [1] and Laroche M and Taylor T [5] the researchers of customer satisfaction said that the bank's ability to deliver the factors like convenience and accessibility would probably impact on customer satisfaction.

Moutinho L [6] argued that ATM facility resulted in speed of transactions and saved time for customers. Lovelock C [7] identified that secured and convenient location, adequate number of ATMs, user-friendly system and functionality of ATM are the important factors for the customer satisfaction. Moutinho showed how neural networks can bring together psychometric and econometric approaches to the measurement of attitude and perceptions. He used a neural network to analyze data collected from a sample of ATM users on their perception of ATM service. He uses the network to analyze the impact of explanatory (input layer) variables on the hidden layer attributes and the endogenous (output layer) variables- satisfaction with ATMs, likelihood of recommendation to others, extent and frequency of use. Moutinho defines four user types, characterized as disaffected youths, technophobes, the pro technology segment and the cost-conscious segment.

Based on the prior studies, Al-Hawari M, et al. [8] compiled a list of five major items about ATM service quality that include convenient and secured locations, functions of ATM, adequate number of machines and user-friendliness of the systems and procedures. Most early studies found location convenience influences most on bank selection. The main purpose of his work to highlight the significance of automated service factor, customer trust and

delight in customer commitment within the United Arab Emirates banking context. The relative importance of Automated service factors to customer delight, trust and commitment was examined the paper then proposed a conceptual model of the relationship between Automated factors, customer delight, trust and commitment within the United Arab Emirates banking context. A survey was designed and data collected through the mail intercept method. AMOS 6 was used to test the hypothesized relationships. In the findings, most of the Automated factors had no direct relationship with customer commitment, but an indirect one through customer trust and delight. Automated factors have a direct and positive influence on customer commitment. Customer trust is also positively and directly related to customer commitment.

Khan MA [9] said that the key dimensions of automated banking service quality include reliability, ease of use, privacy, convenience and responsiveness. The aim of this work was to identify the dimensions of ATM service quality and to evaluate customers perceptions of the relative importance of these dimensions. A structured questionnaire gleaned from the literature and focused group studies was used to collect data from 530 ATM customers of 15 banks in Ghana. Descriptive statistics, exploratory and confirmatory factor analysis, as well as multiple regression were used to identify the relative importance of the dimensions of ATM service quality. For the findings, the work identified five dimensions of the ATM model. In order of importance, these dimensions are reliability, convenience, responsiveness, ease of use and fulfillment.

Wolfenbarger M and Gilly MC [10] argue that reliability is the strongest predictor of customer satisfaction. They discovered that over the past years, e-commerce had become increasingly popular in China. Past research showed that customer satisfaction and loyalty for online purchases is lower than that for shopping in more traditional ways. How to maintain and increase the satisfaction and loyalty of customers remained a challenging issue to bankers. The purpose of this paper was to understand what affects customer satisfaction and loyalty. A conceptual model of customer satisfaction and loyalty was developed where four dimensions of e-service quality- efficiency, requirement, fulfillment, system accessibility and privacy. The partial least square estimation algorithm was then applied to analyze data sample of 164 customers. The result of the study showed that efficiency and fulfillment have positive effects on customer satisfaction and fulfillment and privacy have positive effects on customer loyalty. However, the remaining factors have no significant effect on either customer satisfaction or customer loyalty. In addition, customer loyalty is positively affected by customer satisfaction.

Bimbhit in his study on technology led customer service found out that the customers would expect security of money, growth, safety and respectful listening from their banks. ATMs are used no longer for dispensing money only but also offer more information and services. The aim of this study was to examine the services Quality in ATM services provided by selected public sector banks in Kanchipuram town. For this investigation, primary data was collected from 500 respondents through a structured questionnaire. It also included the review of the various services provided by the five banks under the study. The study suggested that banks should proactively monitor customer preferences with regard to the transaction fee; delivery of ATM cards due to loss of original cards in other order to retain their customers.

Sarangapani A and Mamatha T [11] found that the introduction of ATMs, internet banking and credit cards help the customers to carry out their transaction in an easy way. ATM helps the customers to transact within a short time. Malavizhi V [12] mentioned that age is the main factor that determines ATM services in Coimbatore City.

Many studies had investigated the effects of demographic profile such as age, educational qualification, sex on the customers' attitude towards the acceptance of the new technologies [13]. The research on the relationship among young people and financial institution established that these people have their accounts in more than one bank, because of need for convenience, requirement of more services offered and 24- hours' availability of ATM and location. Initially they were required to focus more on perception of a customer, whether he is willing to adopt the technology or not [3]. It has been established through research that customer's response to a specific technology depends upon the service quality that is provided [14].

Sample size and selection methods

A sample of 40 ATM users of NFC Bambili Branch will be selected. The selection will be done through purposive sampling technique. In a purposive/judgement sample, a researcher selects a sample based on his/her experience or knowledge of the group to be sampled. According to the importance of purposive sample is to select information rich cases from which one could learn much about the issues that are important to the study. The said author further asserts that in purposive sampling, the sample size is small [15].

Data collection tools/methods

The researcher used a structured questionnaire that was comprised of different questions to be administered directly to respondents. The questionnaire had different sections, ranging from the bio data of the respondents to questions that helped the researcher collect information/data about the subject at hand.

Model specification

Multiple regression analysis was used to investigate the effects of ATM services on customer satisfaction. The dependent variable was customer satisfaction and the independent variables are security, time saving, convenience, reliability, education and age. The basic objective of using regression equation in this study was to make the researcher more effective at describing, understanding, predicting and controlling the stated variables and regress the independent variables on the dependent variables. These variables are selected based on literature review [16].

Security: It is generally believed that when the cash of customers is secure, there is customer satisfaction unlike when the customers' money is insecure. This implies that there is a direct or positive relationship between security and customer satisfaction. Numerous studies have attempted to illustrate the effect of security on customer satisfaction. Example include; Lovelock [7], Al-Hawari, et al [8].

Time spent: It is believed that the higher the time spent to acquire ATM services, [17] the lower the satisfaction and the smaller the time spent to acquire ATM services the higher the satisfaction of the customer. This implies that there is an inverse or indirect relationship between time and customer satisfaction. Moutinho [6] carried out a study and found out that the ATM machines saved time and made the ATM users to be more satisfied.

Convenience: When the ATM services are more convenient, customers are more satisfied than when the ATM services are more inconvenient. This means that there is a direct or positive relationship between convenience and customer satisfaction. Khan [9] carried out a study and concluded that there is a positive relationship between convenience and customer satisfaction.

Reliability: Generally, it is considered that when ATM services are reliable, the customers will be more satisfied than when the ATM services are unreliable. This means that there is a direct or positive relationship between reliability of ATM services and customer satisfaction. Wolfenbarger & Gilly, [10] carried out a research and discovered that reliability significantly has an effect on customer satisfaction.

Age: Malavizhi [12] did a research to find out the effects of age of ATM users on customer satisfaction and discovered that youths are more adapted to changes in technology than older people [18]. This means that age of ATM users and customer satisfaction.

$$\text{cussat} = \beta_0 + \beta_1 \text{secu} + \beta_2 \text{time} + \beta_3 \text{conv} + \beta_4 \text{relia} + \beta_5 \text{edu} + \beta_6 \text{age} + \varepsilon$$

Where

secu stands for security in use of ATM services

time stands for time saving in use of ATM services

conv stands for convenience in the use of ATM services

relia stands for reliability in use of ATM services

edu stands for educational attainment of the respondents

age stands for the age distribution of the respondents

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_{ss}, \beta_6$ are respectively the constant term and the coefficients of secu, time, conv, relia, edu, age measuring the change in the dependent variable resulting from a unit change in each of those variables holding any other thing constant. From economic theory, [19] it is expected that the signs of the coefficients $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_{ss}, > 0$ and $\beta_5, < 0$

ε is the disturbance term which is assumed to follow a normal distribution.

Estimation technique

The study employed the Ordinary Least Square technique for the estimation of the parameters of the model specified above. This is because it possesses the best linear unbiased estimator (BLUE) property and has been widely used in literature. Unbiased means that the estimated coefficients are a true representation of the population parameters and it is also said to have the minimum variance amongst all other estimators rendering it efficient. The OLS technique of estimation is used when the dependent variables vary in the range negative infinity to positive infinity [20].

Data Presentation and Discussion of Results

Descriptive analysis

Table 1 presents a summary of descriptive statistics of all the variables included in the empirical model of this study [21].

Source: Computed by the author using STATA: From observation it is seen that all variables have an observation of 40 which is a statistically valid number. Customer satisfaction has a mean value of 1.72 meanwhile its minimum and maximum values are 1 and 3 respectively. This indicates to us that Customer satisfaction has not performed over the years. This is justified by the fact that its mean is closer to its minimum value than it is to its maximum value.

The average value of security is calculated at 3.24 with values ranging from a minimum value of 1 to a maximum value 4. This indicates to us that security have performed over the years. This is justified by the fact that its mean is closer to its maximum value than it is to its minimum value.

We also can observe that the mean of time saving is 2.52 meanwhile its minimum and maximum values are 1 and 4 respectively. This indicates to us that time saving has not performed over the years. This is justified by the fact that its mean is closer to its minimum value than it is to its maximum value [22].

We can further observe that the mean of convenient use of ATM is 2.74 meanwhile its minimum and maximum values are 1 and 4 respectively. This indicates to us that convenient use of ATM has performed over the years. This is justified by the fact that its mean is closer to its maximum value than it is to its minimum value.

Reliability has as mean value 3.48 with its minimum and maximum values being 1 and 5 respectively. This indicates to us that reliability has performed over the years. This is justified by the fact that its mean is closer to its maximum value than it is to its minimum value.

Further results show that, the mean value of educational attainment is

calculated at 3.82 with values ranging from a minimum value of 2 to a maximum value 5. This indicates to us that educational attainment has performed over the years. This is justified by the fact that its mean is closer to its maximum value than it is to its minimum value.

Further results show that, the mean value of age of respondent is 1.4 with values ranging from a minimum value of 1 to a maximum value 2. This indicates to us that age of respondent have not performed over the years. This is justified by the fact that its mean is closer to its minimum value than it is to its maximum value.

Lastly, the mean value of marital status is 2.92 with values ranging from a minimum value of 1 to a maximum value 5. This indicates to us that marital status has not performed over the years. This is justified by the fact that its mean is closer to its minimum value than it is to its maximum value [23].

Correlation analysis

The correlation analysis of the independent variables is a prerequisite for the detection of possible problem of multicollinearity. Results of the pairwise correlation analysis are presented in Table 2 [24].

Source: Computed by the author using STATA: Results from Table 2 shows that all the correlation coefficients along the diagonal are unitary indicating that each variable has a perfect positive correlation with itself. The table also reveals to us that many of the independent variables are positively correlated to each other meanwhile a negative correlation was also observed amongst other explanatory variable. The degree of correlation amongst many is significant at 1%, 5% and 10% while only a few explanatory variables are not significant. More so, the correlation amongst some of the independent variables is very high (above 0.6). This implies therefore that there is possibility of the existence of multicollinearity among the variables. However, this can't be made certain by just observing the correlation coefficient as this high correlated might just be out of chance. It becomes imperative for us to carry out a formal test for multicollinearity. This shall be done subsequently in this chapter by conducting a Variance Inflation Factors (VIF) test [25].

Regression analysis

Source: Computed by the author using STATA: Results from Table 3 indicate that the coefficient of information to customers is negative (-.5315677) indicating that there is an indirect effect of security in the use of ATM on customer satisfaction in NFC Bank Bambili. However, this finding is statistically significant since the probability value is (0.000) less than 1%.

The coefficient of time saving in the use of ATM is positive (.4530123) meaning that there is a direct effect of saving in the use of ATM on customer satisfaction in NFC Bank Bambili. A unit increase in training will bring about a 7.25 correspondent increase in customer satisfaction in NFC Bank Bambili. This finding is not in line with our a priori expectation, thus good for policy recommendation. However, the coefficient is statistically significant since the probability value is (0.000) less than 1%.

Also, convenience in the use of ATM has a positive coefficient of (.0434103) indicating that there is a positive effect of technology on customer satisfaction in NFC Bank Bambili. A unit increase in convenience in the use of ATM will lead to a corresponding customer satisfaction in NFC Bank Bambili by 0.61

Table 1. Descriptive statistics of the study.

Variables	Obs	Mean	Std. Dev.	Min	Max
cussat	40	1.72	.7010197	1	3
secu	40	3.24	1.152814	1	4
time	40	2.52	1.373807	1	4
conv	40	2.74	1.454199	1	4
relia	40	3.48	1.417673	1	5
edu	40	3.82	.8002551	2	5
age	40	1.4	.4948717	1	2
ms	40	2.92	1.322336	1	5

everything being equal. However, this finding is statistically insignificant since the probability value is (0.542) greater than 10%.

Reliability in the use of ATM has as coefficient a positive value of (.1192326), meaning there is a direct effect of reliability in the use of ATM on customer satisfaction in NFC Bank Bambili. In terms of marginal value, a 1% increase in reliability in the use of ATM will result in a 6.46 increase in customer satisfaction in NFC Bank Bambili. This result is however significant since the probability value is (0.000) less than 1%.

Furthermore, the results also show that educational attainment negatively (-.4006803) affects customer satisfaction in NFC Bank Bambili. In other words an increase in the educational attainment will cause the level of customer satisfaction in NFC Bank Bambili to decrease. The finding is however significant at 1% since the probability value (0.000) is less than 1%.

Also, ages of respondent has a positive coefficient of (.6147533) indicating that there is a direct relationship between ages of respondent and customer satisfaction in NFC Bank Bambili. However, this finding is statistically significant since the probability value is 0.0000, less than 1%.

Lastly, the coefficient of marital status of respondents is positive (-.7019971) meaning that there is an indirect relationship between marital status of respondents and customer satisfaction in NFC Bank Bambili. However, the coefficient is statistically significant at 1% since the probability value (0.000) is less than 1%.

It is worth noting that the overall model was significant at 1% and that about 50% of variation in risk duration is explained by a joint variation of all the explanatory variables included in the model. Furthermore, it can be concluded that the results were reliable as the VIF test show no multicollinearity amongst independent variables [26] (Table 3).

Discussion of findings

Results from Table 3 indicate that the coefficient of security in the use of ATM is negatively and significantly affect customer satisfaction in NFC Bank

Bambili. This finding is in line with our a priori expectation. Thus, we reject the null hypothesis and explain that security in the use of ATM significantly affects the level of customer satisfaction in NFC Bank Bambili. This is in line with what [7] found out. He did a research and found out that there exists a positive relationship between security of money and customer satisfaction.

The coefficient of time saving in the use of ATM is positive meaning that there is a direct effect of time saving in the use of ATM on customer satisfaction in NFC Bank Bambili. A unit increase in time saving in the use of ATM will bring about a correspondent increase in customer satisfaction in NFC Bank Bambili. This finding is not in line with our a priori expectation, thus good for policy recommendation. However, the coefficient of is statistically significant since the probability value is less than 1%. We reject the null hypothesis and conclude that time saving in the use of ATM significantly affects the level of customer satisfaction in NFC Bank Bambili. This finding is in line with [5] who found out that there is a negative or indirect relationship between time and customer satisfaction. Which means that, the higher the time spent to acquire ATM services, the lower the degree of customer satisfaction.

Also, convenience in the use of ATM has a positive coefficient of indicating that there is a positive effect of technology on customer satisfaction in NFC Bank Bambili. A unit increase in convenience in the use of ATM will lead to a corresponding increase customer satisfaction in NFC Bank Bambili everything being equal. However, this finding is statistically insignificant since the probability value is greater than 10%. We fail to reject the null hypothesis and conclude that convenience in the use of ATM insignificantly affects the level of customer satisfaction in NFC Bank Bambili. This is in line with [9] who found out that there is a positive relationship between convenient use of ATM services and customer satisfaction. He found out that when the ATM services are more convenient to use, there is an increase in customer satisfaction.

Reliability in the use of ATM has as coefficient a positive value meaning there is a direct effect of longevity on customer satisfaction in NFC Bank Bambili. In terms of marginal value, a 1% increase in reliability in the use of ATM will result in an increase in customer satisfaction in NFC Bank Bambili.

Table 2. Computed by the author using STATA.

	Secu	Time	Conv	Relia	Edu	Age	Ms
Secu	1.0000						
Time	-0.1188	1.0000					
	0.4112						
Conv	0.5379	-0.3591	1.0000				
	0.0001	0.0104					
Relia	0.2212	0.2081	-0.0610	1.0000			
	0.1226	0.1469	0.6737				
Edu	0.3934	-0.0916	0.1131	0.5498	1.0000		
	0.0047	0.5269	0.4342	0.0000			
Age	-0.1174	0.1479	-0.0318	-0.4090	-0.4845	1.0000	
	0.4167	0.3053	0.8265	0.0032	0.0004		
Ms	0.2758	0.3183	0.1625	0.3707	0.3642	-0.0589	1.0000
	0.0525	0.0243	0.2595	0.0081	0.0093	0.6845	

Table 3. Regression analysis of the study.

Variables	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Secu	-.5315677	.0317741	-16.73	0.000	-.5956905	-.4674449
Time	.4530123	.0624997	7.25	0.000	.3268828	.5791417
Conv	.0434103	.0706877	0.61	0.542	-.0992432	.1860638
Relia	.1192326	.018443	6.46	0.000	.0820131	.1564521
Edu	-.4006803	.0465333	-8.61	0.000	-.4945883	-.3067723
Age	.6147533	.0777285	7.91	0.000	.4578908	.7716157
Ms	-.7019971	.0395228	-17.76	0.000	-.7817573	-.6222369
_cons	4.486591	.5157318	8.70	0.000	3.445802	5.52738
F (7,42)	= 162.35	-	-	-	Prob > F	= 0.0000
R-squared	= 0.9644	-	-	Adj	R-squared	= 0.9584

This result is however significant since the probability value is less than 1%. We reject the null hypothesis and conclude that reliability in the use of ATM significantly affects the level of customer satisfaction in NFC Bank Bambili [27].

Furthermore, the results also show that educational attainment negatively affects customer satisfaction in NFC Bank Bambili. In other words an increase in the educational attainment will cause the level of customer satisfaction in NFC Bank Bambili to decrease. The finding is however significant at 1% since the probability value is less than 1%. We reject the null hypothesis and conclude that educational attainment significantly affects the level of customer satisfaction in NFC Bank Bambili.

Also, ages of respondent has a positive coefficient of indicating that there is a direct relationship between ages of respondent and customer satisfaction in NFC Bank Bambili. However, this finding is statistically significant since the probability value is 0.0000, less than 1%. We reject the null hypothesis and conclude that ages of respondent significantly affects the level of customer satisfaction in NFC Bank Bambili. This is in line with [12] who found out in his research that there is a positive relationship between reliability of ATM services and customer satisfaction.

Lastly, the coefficient of marital status of respondents is positive meaning that there is an indirect relationship between marital status of respondents and customer satisfaction in NFC Bank Bambili. However, the coefficient is statistically significant at 1% since the probability value is less than 1%. We reject the null hypothesis and conclude that marital status of respondents significantly affects the level of customer satisfaction in NFC Bank Bambili.

Summary of major findings

The main objective of this study was to assess the effects of ATM services on customer satisfaction in NFC Bank Bambili. The case of ATM was captured using the characteristics of its services. I made use of survey data with the help of a questionnaire. Among 60 sampled questionnaires, only 40 were returned. At the end of this analysis, the following major results were recorded:

It was derived from the regression analysis there is a positive and significant effect of time saving in the use of ATM, convenience in the use of ATM and reliability in the use of ATM on customer satisfaction in NFC Bank Bambili. It was established that age and marital status do affect customer satisfaction in NFC Bank Bambili positively.

Furthermore, another characteristic of ATM which is security in the use of ATM exerts a negative effect on customer satisfaction in NFC Bank Bambili. These results are not in line with our a priori expectation. More results revealed that educational attainment and marital status does affect customer satisfaction in NFC Bank Bambili [28].

The Univariate analysis revealed that there was an unequal distribution in the respondents' majority of whom were either employed or students. All the respondents held accounts with National Financial Credit Bank Bambili branch, knew about ATM banking and all of them owned ATM cards.

More than a quarter of the respondents identified withdrawal of money to be the major service identified by the ATM, followed by checking of balances on one's account. Most of the respondents said that the services offered by the ATM were satisfactory or enough.

Most of the respondents rated the services/functions of the ATM as effective, the cost of using the ATM was rated cheap and the time taken to access ATM services was rated small. More than half of the respondents felt that their money was secure and most of the respondents said that on average they spent about 0-5 minutes in the queue before accessing the ATM services.

More than three quarters of the respondents said that they experienced problems while using the ATM and the commonest problem identified was network/machine breakdown, but the respondents said that they experienced such problems less often. They also said that the bank had taken some measures to solve the problems and more than three quarters of the respondents said that all their problems had been solved once they reported to the bank [29].

STATA 10 was used to test the hypotheses. It was found out that there was no significant relationship between the services offered by ATMs such as withdrawal, cash/cheque deposit and checking of bank balances and customer satisfaction.

Conclusion

Poor use and low effectiveness of ATM services leads to problems like congestion inside the banks, spending much time in the queues before accessing the ATM services by the users and it also discourages people to open accounts with NFC bank due to such problems as machine breakdown that manifests into poor services offered.

From the study, it can be realized that to improve the effectiveness of the ATM services, all potential barriers to its effectiveness must be considered. An expanded view that considers factors that lead to the low/poor effectiveness of the ATMs must be considered.

Recommendations

To increase the effectiveness of the ATM, NFC bank should sensitize its customers about the availability of the ATM and the different services it offers.

More ATMs should be installed especially in busy places for proximity purposes and for reducing the amount of time spent in the queue before accessing the ATM services.

NFC bank should make sure that the cost of using the ATM is kept as low as possible and this will encourage more people to use these services and this helps to reduce congestion in the banks.

Constant and consistent checkups should be done on these ATM machines to avoid network/machine break downs and any other possible problems that may inconvenience the users.

This study confined itself on respondents without any kind of disabilities. The research recommends for further studies to explore if there are customers with some kinds of disabilities to understand if the ATM services being offered by NFC bank Bambili Branch are satisfactory to this group of people.

Further studies should also consider increasing the number of respondents to be interviewed to understand if they have more concerns than the ones expressed by respondents who were interviewed for this study.

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Conflict of Interest

None.

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