

DETERMINANTS OF CONSUMERS' ACCEPTANCE TO USE SELF-OPERATING MACHINES: AN EMPIRICAL STUDY AMONG THE BANK CUSTOMERS OF SONITPUR DISTRICT OF ASSAM

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Abstract: Banks are the backbone of every economy and consumers are the life blood of any business. The strength and flexibility of the banking structure helps to evaluate the level of growth of an economy. Since the banks are increasingly adopting the innovated technology, automatically there arises a gap between financial services and information technology while being diffused. This information gap can be viewed in terms of the extent of awareness and adoption of innovated products and services offered by the banks to their consumers and also the risk involved in their execution. These innovations made by the information technology in banking, and tangible computing facilitate the human's life by inventing Self-Service Technology (SSTs) when it changed the way we interact with the environment as well as new technologies did. Different types of self-operating machines have been installed by banks in different places for the convenient use of consumers like ATMs, CDMs (Cash Deposit Machines/ Cheque Deposit Machines), POS (Point Of Sale) machines or Swipe Machines through which consumers can make payments using plastic cards like Debit cards, Credit Cards, Self Passbook Update Machines etc. In this particular research paper it is being tried to find out the level of awareness of the consumers about these services and also the extent of acceptance of these devices. Providing attention to this issue, an analysis has been made to study the consumers' responses towards its uses and if they are not using the devices, then which factors are affecting their willingness to use such self operating machines. Hence, the author aimed to study the determinants of acceptance of these devices by the consumers of different banks situated in the Sonitpur district of Assam.

Keywords: Awareness, Self-Service Technology, Machines, Innovation, Consumers.

INTRODUCTION:

It is well understood that banks are the backbone of every economy, and the position of any economy can be best evaluated by the strength and flexibility of its banking structure. During last few decades, banking industry has witnessed many innovations in product, process and procedures. These innovations in banking have gained more importance in the context of their economic significance and ability to delight customers and to gain mileage in a competitive banking environment. It is the competitive environment that compelled banks to provide quality services at the door-step of customers. Therefore, banks are increasingly adopting innovated technology in the process of offering easy and convenient services. Since the establishment of physical branches is too costly for a bank, self service banking offers a convenient and cost effective solution to the issue of bank customers. Self service banking is a system of retail banking whereby the customers perform banking transactions themselves without the help of bank clerks at physical branches (Jubair, 2014). Self-service technologies have replaced the traditional marketplace interaction by a marketplace interaction in which no interpersonal contact is required between buyer and seller. (Rayport & Sviokla. 1994, 1995) Many innovative and technologically enabled self services have introduced by various banks in India. Accordingly, self operated machines have been installed in convenient places enabling consumers to perform functions like withdrawals, deposits, fund transfer, update of bank passbook, requesting for cheque book and drafts and even to perform shopping activities. Automated Teller Machines (ATMs), self updating of passbook machines (For example-State bank of India's passbook update machine-SWAYAM), Cash Deposit Machines, Cheque deposit machines are the main machines installed by banks, allowing customers to perform the above mentioned functions. These machines have changed the way of doing banking business. At the same time, it has enabled the banks to reduce transaction cost, save more money and also saved more time. In spite of huge capital investment by banks in arranging and installing such self-operated machines, there is doubt to what extent customers prefer and use these machines. There is need to focus on this issue and hence need for threadbare analysis. Providing due attention to this issue, it is proposed to conduct a survey among banks' customers to see whether bank is receiving customers' response in using the machines and if not then which factors affecting customers willingness to use these machines. The main aim of this study is to measure the determinants of consumers' acceptance of self-operating machines and the perception of the bank customers towards these innovations installed by the commercial banks. A study is proposed to analyze the level of acceptance and consumers' perceptions towards the machine. Demographic variables such as Age, Gender, Occupation, income levels etc will be taken into account to explore the determinants.

SIGNIFICANCE OF THE STUDY:

The innovated technology introduced by banks have brought paradigm shift in mode of services from delivered service to self-service. Because of customers demand and stiff competition among bankers with respect to innovative means of providing services, banks are compelled to introduce technology that will help the customer to get self-service. As a result, banks have introduced IT enabled technologies like ATMs, cash deposit machine, passbook update machine, card banking, internet banking, mobile banking etc. The proposed area of this study relate to 'acceptance of self-operating machines' by bank customers. This will help in understanding the extent to which customers are ready to adopt self-operating machines and to explore the determinants governing the use of such machines. The findings of the study will help the bankers in analyzing the strength and weaknesses & then to devise strategies in installing such technological inputs which will provide maximum satisfaction to customers & greater mileage to bankers and also enable them to make customer friendly use.

When bank get the satisfied customers, it will help in retaining the existing customers and gain new mileage in attracting new customers. At the same time, customer will be benefitted since use of technological equipments which save their time make the transaction faster and economical.

STATEMENT OF THE PROBLEM:

Customers are the lifeblood of any business and banks are not exception to this. Banking industry is highly service oriented business. When there is service concern, it always deals with the perceptual decision taking of the customer. In this study, we are attempting to figure out the level of acceptance of self-operating machines and the perceptions of bank customers belonging to different banks of Sonitpur District towards the innovations made by the commercial banks. Since Sonitpur District is the second largest district of Assam with 5324 Sq.kms and having population of 19,25,975(as of 2011 Census), it is becoming a trade center for Bomdilla, Tawang, Seppa, Itanagar of Arunachal Pradesh, Dhekiajuli, Rangapara, Biswanath Chariali, Gohpur etc. Sonitpur District is now a very fast developing district of Assam having many bank branches both from Public sector and Private sector. The proposed study will try to find out key determinants for the use of self-operating devices specially ATMs, CDMs, POS machines or Swipe Machines and self updating devices etc. Although technology driven mode of providing services have revolutionized in service industries particularly in Banks, but to what extent customers responded to such services have not been evaluated. So, investment of huge sums for the cause of installations of machines is questionable. The resources, time, and labour utilized for easy, cost effective and faster service will be meaningful provided at least a sizeable part of bank customers responded to such installed innovations. In this regard some questions may be raised as follows:

- (a) Whether the customers of commercial banks are using this service or not?
- (b) If not, then what are the reasons behind it?
- (c) Whether the bank customers be classified on the basis of few demographic variables for use of self-operating machines?

REVIEW OF LITERATURE:

Innovation and development are increasingly becoming sources to gain advantage in strong competitive markets. The marvelous kinds of innovation in technology and hard line blend of it with information technology made a paradigm shift in the banking industry. Technology has transformed whole business landscape for both individual and business.(Abu Sahnab et. Al, 2010).To customers technology offers timeless banking with accuracy (Kesharwani and Bisht,2012),convenience of banking with marginal translation cost (Celik,2008),control and ownership of banking. In this context, (Joseph et.al 1999) found that there is significant increase in the use of technology by banks for delivery of their products and services as it reduces cost of transaction as well as ensures faster and confirm delivery of services. (Meuter et.al 2000) studied the Self-Service technology and categorized them on the basis of technology interface. Banks are benefitted by gaining competitive advantage in terms of attracting high-value customers, enhancing image, increasing revenue, easier expansion ,load reduction on other channels, organizational efficiency (Shah and Clarks,2009),retaining a profitable customer base, cost reduction, supporting customer relations and extending banking reach (Celik , 2008). Meuter et.al (2003) found that the willingness of the customers to use and adopt to newer technologies affect their perceptions of service quality and the level of technology anxiety. Curran and Meuter (2005) found that the perception of the customer about service quality depends upon the type of Self-Service Technology (SST). The earlier researches on technology adoption in Indian context have studied either cultural issues or impact of TAM (De Angeli.et.al 2004). But individualistic factors like acceptability, safety, innovativeness and security issues have not been considered, which also affect customer's decision to try out and adopt new technologies particularly, Self-Service Technology (SST). However, customer adoption of technology still has not been in acceptance level among a major chunk of bank customers (Akhlaq, 2011).Before anyone adopt a technology, all information about it is collected and combined to develop a belief about using the technology. That belief will turn make the individual to accept or reject the technology (Nor and Pearson, 2007).(Chen et.al 2008) produced an integrated model to synthesize the essence of Technology Readiness Index(TRI), Technology Acceptance Model (TAM),The Theory of Planned Behavior (TBP) to explain customers' continued use of Self-Service technology(SST). Many studies have been conducted covering various aspects of technology introduced by banks all over the world but in India limited studies have been conducted and these are also confined to internet banking and mobile banking (Bashir & Madhavaiah , 2014; Srivastava, 2007; Singhal & Padmanabham 2008; Singh, 2011; Devanathan & Jambulingam, 2014).

Several studies have investigated issues involving SSTs, mainly focusing on the development of user profiles (Bateson1985; Darian 1987; Eastlick 1996; Greco and Fields 1991; Langeard et al. 1981; ZeithamI and Gilly 1987). For example, Langeard and colleagues (1981) attempted to segment markets on the basis of willingness to participate actively in the delivery of services. This is one of the most comprehensive early studies done to identify and describe customers who might be willing to use a self-service delivery alternative. Langeard and colleagues (1981) find that participators tend to be younger, single, and better educated and have a lower income level. Bateson (1985) explores the choice between a self-service option and an interpersonal service delivery system. Bateson examines the attractiveness of self-service options when the usual monetary or time-saving incentives are controlled and finds that a significant group of people choose to use a self-service option even without monetary or time-saving benefits.

OBJECTIVES OF THE STUDY:

The main objective of this study is to know the level of acceptance of technologies by bank customers with special reference to ATMs, Kiosks and self update machines and cheque deposit machines. Other objectives of the study include:

- (a) To see various purpose(s) for which bank customers prefer to use SST.
- (b) To study the demographic variables affecting the use of SST.

SCOPE OF THE STUDY:

The scope of this study can be discussed in two aspects namely Geographical scope and Academic scope. The geographical area of this study is confined within the District of Sonitpur of the State of Assam. The population targeted is the person having bank accounts in his or her own name and is habituated of using any of self-operating machines.This particular study will help to measure the level of operations among the general masses and also to know their confidence in using these devices.

Further, the academic scope of this particular study will help to explore the key determinants of acceptance of the self handled machines of the commercial banks. The academic scope will give a chance to enhance the knowledge of the customers who are still not aware of this faster and convenient mode of services. At the same time these findings are expected to benefit both the bankers and the

customers. From the bankers' point of view, self-service banking increases the bank's outreach and lowers the cost of serving the customers. Self service banking provides greater customer convenience because the customers are no longer restricted to do their operations during banking hours (Jubair T,2014). Designing strategies as per customers' requirement will help the bank to have satisfied customer which will further help the bank in retaining existing customers and attracting other people to come and open accounts.

Though many studies have been conducted by different researchers regarding the technically advanced services of commercial banks yet no study has been conducted in Assam in general and in Sonitpur District in particular focusing the self operated machines provided by banks. Hence, this study would be an innovative one in this respect.

METHODOLOGY OF THE STUDY:

This study is aimed at measuring the level of acceptability of self operating machines by bank customers of different banks of Sonitpur District of Assam and will be measured on the basis of responses received from the bank customers.

Sample Design: The population for the study is the bank customers who have bank accounts in any bank of Sonitpur District of Assam. For the purpose of selecting sample the following points will be insisted upon:

- (1) He /She must be a person originated from the state of Assam.
- (2) He /She must have a bank account in any bank of Sonitpur District of Assam in his own name.
- (3) He /She is of 18 years of age.

Sample Survey Method: Since bankers do not share the list of customers with outsiders, it is not possible to employ Random Sampling method. Therefore, a convenient sampling method has been employed among customers using Self-Service Technologies (SSTs). Bank customers have been met at convenient places like bank branches, ATM points, service places etc.

Data Collection Source: This is a exploratory research study and therefore, necessary data has been collected at field level. So, a primary survey has been conducted in selected places through direct personal interview method where the researcher has done a face to face interaction with bank customers using SSTs. The secondary data has been assessed from relevant sources.

Data collection method: A structured Questionnaire is prepared and has been personally distributed among bank customers using Self-Service Technology. Questionnaire has been prepared containing different questions related to the study including the name of the respondents, demographic profiles, educational qualifications etc. Since many valuable studies like Bashir & Madhavaiah (2014) include demographic variables to conduct their study finding the determinants of users' intention to use banking services. Moreover, Fozia (2013) conducted her survey by taking demographic variables into account to test the customer satisfaction on E-banking. Sawalqa (2012) investigated on the financial needs of customers particularly in self service technology by testing the demographic variables of the respondents. All these studies have been completed leaving a valuable result in the society, hence the researcher is hopeful that the proposed way to collect the data for this particular study will make an efficient contribution to the society.

Sampling Size: Keeping the objectives in mind, Questionnaire has been distributed among 50 bank customers having their bank accounts in different banks of the district.

MAJOR ANALYSIS & FINDINGS:

The analysis is done along with the interpretation on the basis of the collected data from the bank customers through the Questionnaire. The results are presented through the tables one by one:

Table 1: Age of the Respondents

Age Group	No of Respondents
18-35	28(56%)
35-50	17(34%)
Above 50	05(10%)
	Total= 50

Table 1 reveals that out of 50 customers highest 56% of them belonging to the age group of 18-35, 34% of them are in the age group of 35-50 followed by 10% customers who are above 50.

Table 2: Educational Qualification of the Respondents

Educational Qualification	No of Respondents
Higher Secondary	12(24%)
Graduate	18(36%)
Post Graduate	15 (30%)
Illiterate	05(10%)

Table 2 indicates that 36% of the respondents are graduates, 30% of them are post graduates, 24% of the respondents are HS passed and remaining 10% customers are illiterate.

Table 3: Marital Status of the respondents

Marital Status	No of Respondents
Married	17 (34%)
Unmarried	33(66%)

Table 3 indicates that 34% of the respondents are married and 66% are unmarried.

Table 4: Occupation of the Respondents

Occupation	No of Respondents
Professional	13 (26%)
Student	21 (42%)
Self- employed	10(20%)
Home-maker	6(12%)

The table 4 shows that 42% of the respondents are students, 26% of them are professionals, 20% of the respondents are self-employed and remaining 12% are home makers.

Table 5: Name of Banks and Bank Accounts of Respondents

Bank Names	No of Account Holders
HDFC	08(16%)
AXIS	06(12%)
PNB	14(28%)
SBI	22 (44%)

The above table shows that 44% of the respondents have their account in State Bank Of India, 28% of them have in Punjab National Bank, 16% of the customers have their account in HDFC and remaining 12% of the respondents run their financial transactions in AXIS Bank.

Table 6: Awareness about SST

Customer Awareness	Responses
Fully Aware	23 (46%)
Had an idea	16 (32%)
No	12 (24%)

The table 6 shows that 46% of the respondents are fully aware about the devices of Self Service Technology and 24% of the respondents are partially aware that means they have an idea about SST but still many information are there to be gained and 24% of them do not have any idea about these services.

Table 7: Uses of Self Service Devices

Devices Used	Responses
ATM	41(33%)
Cash Deposit Machines	26 (21%)
Cheque Deposit Machines	12 (10%)
Passbook Update Machines	28 (23%)
Point Of Sale or Swipe Machines	18 (14%)

[Respondents responded with multiple options]

In the above it is revealed that 33% of the respondents use the ATM services of banks,23% of them use the passbook update machines, again 21% of the customers use the cash deposit devices, 14% of the respondents make payments through Point Of Sale machines and lastly 10% of them use the cheque deposit machines.

Table 8: Factors for using SST devices

Factors	Respondents
Convenience	28 (29%)
Low Service Charge	15 (16%)
Speed	22 (23%)
Transparency	18 (19%)
Security	12 (13%)

[Respondents responded with multiple options]

Table 8 indicates the factors for using SST devices showing 29% of the respondents use these devices for the convenience, 23% of them use it for the speed of the transactions, 19% of them go for using the devices for the transparency i.e a customer can check everything by their own, 16% customers prefer it for the low service charge associated with these devices and lastly 13% of the respondents use these for security purposes.

Table 9: Reasons for not using Self Service Devices

Reasons	Customer Responses
Never heard of SST devices	04 (8%)
Lack of Computer Knowledge	10 (20%)
Concerned about security	12 (24%)
Others	06 (12%)

Table 9 indicates the different reasons for not using the devices which shows that maximum percentage with 24% of them concerned about security, 20% of the respondents do not use the devices for the lack of computer knowledge, again 8% of the customers have never heard of these devices and remaining 12% of them have other reasons.

Table 10: Uses of Self Service Devices

Uses	Responses
Never	4(8%)
Rarely	7(14%)
Sometimes	11(22%)
Often	18(36%)
Always	10 (20%)

Table 10 shows the period of uses of these devices by the respondents which states that majority 36% of the respondents often use these devices, 22% of them use it sometimes, 20% make it always, 14% of the respondents rarely use these machines and remaining 8% respondents who have never used these devices.

From the above analysis of tabular presentation, firstly it is understood that majority of the respondents who belong to the age of 18-35 have seen to make most use of these devices apart from the middle aged and people falling above 50 category. Secondly it is observed that customers who make the maximum use of these Self Service devices are the students of different colleges and universities rather than the professionals, self employers and home makers. In case of customer awareness it is seen that 24% of the respondents still do not have any idea regarding the uses of these devices and even 8% of the customers have never heard of these devices. Though ATM services are adopted by majority of the customers yet many self service machines are still there to come into the use by people. From the analysis it can be stated that those customers who opted these services, give their importance to the convenience factor of making a financial transactions but 24% of the respondents are concerned about the security of the transactions hence they do not prefer to use these machines.

LIMITATIONS OF THE STUDY:

(1) **Empirical Study:** The study will be the first of its kind covering the determinants of consumers' acceptance of self operating machines. Since there is no reference of such study in anywhere in Assam, the validity of findings cannot be examined.

(2) **Sampling Error:** This research may not be free from sampling error. Bank customers to be interviewed may not represent the population as a whole.

(3) **Biased Response:** In primary survey, respondents' responses as the basis of data for analysis. A respondent may not give proper reply which may divert the findings from actual experience.

Conclusion:

In banking industry the self-service technology is a new era which explores the new horizons of success and development to facilitate advancements and for the betterment of society, open the door of development for banking industry to enhance business operations. This particular study has focused to investigate the factors which affect the behavioral intentions of the bank customers to use SST devices and the innovated technology. A survey was made to collect data through convenient sampling approach and by using the percentage methods tables have been prepared which showed that Convenience, Low service charge, Speed, Transparency, Security etc are the factors which have a significant direct influence on customer's behavior to adopt the use of self- service devices. From the analysis of the study it is also revealed that many people apart from youths, the middle aged and people belonging to above 50 are keeping themselves aside from using SST services. The perception of these consumers can be changed but awareness programme, friendly usage, less charges, proper security etc. Some customers are not fully familiar with the technology used by their banks that confirm to be a complexity in view of users because they are dealing with financial transaction and they need to know how it works. Moreover, many responses were also received like they do not have the knowledge of computer. Bank could arrange free training of computer programme, conferences and workshops on the uses of these machines in Universities, colleges and companies to direct awareness among consumers and to develop their self efficient beliefs about SST. People with higher computer knowledge are more readily prepared to use the self operated machines because they have more favorable perceptions to the system's use. Banker practitioners communicate the safety measures undertaken for the self service technology and promote the safety of transactions through these devices.

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