



## IMPACT OF INFORMATION TECHNOLOGY ON CUSTOMER SERVICES WITH REFERENCE TO SELECTED BANKS IN CHANDIGARH

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### ABSTRACT

Indian banking industry, today is in the midst of an IT revolution. A combination of regulatory and competitive reasons has led to increasing importance of total banking automation in the Indian Banking Industry. The purpose of the paper is to examine the impact of information technology on operational activities of banks, operational efficiency of employees and to acquaint with the level of satisfaction among the customers and employees. Data is collected from 156 customers and 48 employees working in private and public sector bank branches in Chandigarh. It is noticed that in improving customer services, management information system and ensuring high productivity, technology orientation has become inevitable. Benefits of information technology in banking are: increases operational efficiency, productivity and profitability, offering the superior quality customer services, multi-channel, real-time transaction processing, ability to better cross selling of products and services, improved management information system, management and accountability, efficient non-performing assets (NPA) and risk/credit management and minimum transaction costs. In creating a viable and efficient banking system, which can respond adequately to the needs of growing economy, technology has a key role to play. The technological challenge is to identify suitable areas of automation, selecting appropriate software and priorities the implementation on suitable and cost effective hardware so that in ultimate analysis, gains outweigh the cost.

**KEYWORDS:** Banking Industry, non-performing assets (NPA),

### INTRODUCTION

The IT revolution has set the stage for unprecedented increase in financial activities across the globe. The progress of technology and the development of worldwide networks have significantly reduced the cost of global funds transfer. Advancements in technology have also led to improvements in the ways in which banks process information. Technology has opened up new markets, new products, new services and efficient delivery channels for the banking industry. It is information technology which enables banks in meeting such high expectations of the customers who are more demanding and are also more techno-savvy compared to their counterparts of the yester years. Customers demand instant, anytime and anywhere banking facilities. Banks are increasingly interconnecting their computer systems not only across the branches in a city but also to other geographic locations with high-speed network infrastructure, and setting up local area and wide area networks and connecting them to the Internet. Technology has brought various products like net banking, credit card online, mobile banking, online payment of excise & service tax, phone banking, bill payment, shopping, ticket booking, railway ticket booking through SMS, smart money order, card to card funds transfer, funds transfer (e-cheques), anywhere banking, internet banking, mobile banking etc. Core Banking Solutions is new jargon frequently used in banking circles. The advancement in technology especially internet and information technology has led to new ways of doing business in banking. These technologies have cut down the time and facilitate working simultaneously on different issues and increasing efficiency. It allows the user

(customers) to operate accounts from any branch if it has installed core banking solutions. This new platform has changed the way of working in the banks.

### IMPACT OF COMPUTERIZATION AND INFORMATION TECHNOLOGY ON BANKING SERVICES, OPERATIONS AND ENVIRONMENT

#### ROLE OF IT IN BANKING INDUSTRY

Indian banking industry, today is in the midst of an IT revolution. Direct deposit allows Companies and Governments to electronically transfer the payments into various accounts. Debit cards which can also be used as ATM cards, instantaneously deduct money from an account when the card is swiped across a machine. Electronic banking by phone or computer allows customers to access information such as account balances and statement history, pay bills and transfer money from one account to another. Advancements in technology have also led to improvements in the ways in which banks process information. The progress of technology and the development of worldwide networks have significantly reduced the cost of global funds transfer.

#### WORKING CONDITIONS

**Hours-** To improve customer service and provide greater access to bank personnel, banks are establishing centralized phone centres, staffed mainly by customer service representatives. Employees of phone centres spend most of their time answering phone calls from customers and must be available to work in evening and weekend shifts. Administrative support employees may work in

large processing facilities, in the banks' head quarters or in other administrative offices.

**Work environment:** Branch office jobs particularly teller positions require continual communication with customers, repetitive tasks and a high level of attention to security. Tellers also work for long periods in a confined space. Commercial and mortgage loan officers often work out of the office, visiting clients, checking loan applications and soliciting new business. Loan officers may travel to meet out-of-town clients or work in evenings if it is the only time at which a client can meet. Financial service-sales representatives may also visit clients in the evenings and on weekends to go over the client's financial needs. The remaining employees located primarily at the headquarters or other administrative offices usually work in comfortable surroundings and put in a standard work week.

### **TECHNOLOGY PRODUCTS**

Net Banking, Credit Card Online, Mobile Banking, NetSafec, Monies Electronic Fund Transfer, Online Payment of Excise & Service Tax, Phone Banking, Bill Payment, Shopping, Ticket Booking, Railway Ticket Booking through SMS, Prepaid Mobile Recharge, Smart Money Order, Card to Card Funds Transfer, Funds Transfer (eCheques), Anywhere Banking, Internet Banking, Mobile Banking etc.

### **CUSTOMER RELATIONSHIP MANAGEMENT**

Customer Relationship Management (CRM) refers to the methodologies and tools that help businesses manage customer relationships in an organized way. For small businesses, customer relationship management includes: CRM processes that help to identify and target their best customers, generate quality sales leads, plan and implement marketing campaigns with clear goals and objectives; CRM processes that help to form individualized relationships with customers (to improve customer satisfaction) and provide the highest level of customer service to the most profitable customers; CRM processes that help to provide employees with the information they need to know their customers' wants and needs and build relationships between the company and its customers.

Customer relationship management tools include software and browser-based applications that collect and organize information about customers. For instance, as part of their CRM strategy, a bank might use a database of customer information to construct a customer satisfaction survey, or to decide which new product their customers might be interested in. It sometimes called customer service management. Using customer relationship management (CRM) tools, Termite Extermination Inc. was able to develop and implement a marketing plan that increased sales dramatically.

### **MANAGEMENT INFORMATION SYSTEM**

A management information system (MIS) is a subset of the overall internal controls of a business covering the application of people, documents, technologies and procedures by management accountants to solve business problems such as costing a product, service or a business-wide strategy. Place of computer in MIS is as follows:-

Formal MIS can be either manual or computerized. The manual MIS uses paper and technology where as Computerized MIS also known as Computer-based Information System (CBIS) relies on computer hardware and software technology to process and disseminate information. The Computerized MIS has following features: There is update of huge mass of raw data of related and unrelated nature derived from internal and external sources at different periods of time; there is high ability to process data into information in MIS with accuracy and high speed even though it requires complex computation, analysis, comparison and summarization. Though there may be manual processing of data, it is generally slow and inaccurate. As contrast to this, computerized processing has speed and reliability; computerized system has enormous capacity to store data of various types because of high memory of computers. Information can be retrieved quickly whenever needed; the input stored in a computer can be processed into a number of ways to serve different purposes. The system is so designed that information users at different levels and in different units of the organization are in a position to obtain information in the form in which they want; Time required for information storing, processing and retrieving is shortened and information users have quick access to information needed; and computerized MIS reduces the size of infrastructure required for the operation of an efficient MIS.

### **CORE BANKING SOLUTIONS (CBS)**

CBS is one of the recent developments in the field of banking and it has proved to be very useful. It is a facility provided by banks in which a person having an account in one branch can operate his account in another branch. This has become possible because each account holder is given a specialised computerized and unique account number. In simple terms, CBS is a type of banking in which a person who opens a bank account in a particular branch of a bank will be a customer of the bank rather than being a customer of a particular branch. Core banking is all about knowing customers' needs. Providing them with the right products at the right time through the right channels 24 hours a day, 7 days a week using technology aspects like Internet, Mobile ATM etc.

The platform where communication technology and information technology are merged to suit core needs of banking is known as Core Banking Solutions. Here computer software is developed to perform core operations of banking like recording of transactions, passbook maintenance, interest calculations on loans and deposits, customer records, balance of payments and withdrawal are done. This software is installed at different branches of bank and then interconnected by means of communication lines like telephones, satellite, internet etc. It allows the user (customers) to operate accounts from any branch if it has installed core banking solutions. This new platform has changed the way of working in the banks.

### **REVIEW OF LITERATURE**

*Shenkar (1987)* conducted the study to find the perceptions of bank employees regarding computerization. A Smallest Space Analysis generated six spatial regions of

employee perceptions concerning computer impact: efficiency, authority, employee redundancy, job problems, communications problems, and computer problems. **Morrison and Berndt (1990)** concluded that additional IT investments contributed negatively to productivity, arguing that "estimated marginal benefits of investment (in IT) are less than the estimated marginal costs".

**Loveman (1994) and Barua (1991)** posited that there is no conclusive evidence to refute the hypothesis that IT investment is inconsequential to productivity.

**Brynjolfsson and Hitt (1995)** concluded that Information Technology contribute significantly to firm level output. In fact, they find that I.T. capital contributes an 81% marginal increase in output, whereas non-IT capital contributes 6%. Similarly they show that IS-labour is more than twice as productive as non-IS labour.

**Lichtenberg (1995)** concluded that there is significant benefit from investment in Information Technology especially in the Banking Industry.

**Torkzadeh and Doll (1998)** conducted a study to know the impact of information technology on work life. Chief executive officers spending millions of dollars on information technology face the critical issue of assessing the impact of this technology on work.

**Karimi, Somers and Gupta (2001)** found that the IT-leader firms have a higher level of IT management sophistication and a higher role for their IT-leaders compared to IT-enabled customer focus, IT-enabled operations focus, and IT-laggard firms. **Chalmers (2005)** methodology for Customer relationship management (CRM) is a customer-focused business strategy that dynamically integrates sales, marketing and customer care service in order to create and add value for the company and its customers. It describes a formal methodology for directing the process of developing and implementing a CRM System that considers and integrates various aspects, such as defining a customer strategy, re-engineering customer-oriented business processes human resources management, the computer system, management of change and continuous improvement.

**Castelino (2006)** suggested that Indian banking industry has provided the leading edge to what is happening to the Indian economy.

**Sobol and Cron (2006)** conducted the study to find the relationship between computerization and several measures of overall firm performance. Three performance comparisons are presented: users versus non-users of computers, three levels of usage, and class of computer usage. Results indicate that computerization is related to overall performance. Non-users tend to be small firms with about average overall performance.

**Shetty (2006)** concluded that globalization in banking is based on four important pillars viz. trade in goods and services; flow of capital and movement of human beings across boundaries; harmonization of regulatory framework in different countries; and developments in technology, particularly those in information technology.

## METHODOLOGY

### Need of the study

In today's era of competition, Computers have become an essential part in every organization. The basic reason

behind the selection of this topic for research is to know the impact of computerization on customer services, management information system, operational efficiency of employees in banks etc.

### Objectives of the study

The study focuses on the following objectives:

- To know the impact of computerization on operational activities of the banks and on the operational efficiency of employees.
- To acquaint with the level of satisfaction among the customers and employees after the introduction of computerization in banks
- To know the attitude of customers and employees after computerization.

### Research design

The primary data was collected from branches of one public sector bank (taken as Bank A) and one private sector bank (taken as Bank B) at Chandigarh through interviews and comprehensive questionnaires involving open ended and close ended questions: Questionnaire I- Customers Perceptions & Questionnaire II - Employees Perceptions. The secondary data was collected through books, brochures, journals and website of the banks. Bank A (public sector bank) and Bank B (private sector bank) are selected out of top ten banks in India according to their deposits from the list of banks given in the Reserve Bank of India (RBI) Bulletin for the year 2008-09. The survey was conducted on the sample of 156 customers - 82 from Bank A and 74 from Bank B; 48 employees - 28 from Bank A and 20 from Bank B. The parameters are: Gender, Income levels and profession of respondents.

## ANALYSIS AND INTERPRETATION OF FINDINGS

A. Analysis of Customer's Perceptions

B. Analysis of Employee's Perceptions

### A. Analysis of Customer's Perceptions in Bank A and Bank B

**Bank A:** For the purpose, the customers of computerized branches of Bank A, Chandigarh were interviewed. Although these entire customers are not availing the full range of facilities as mentioned in the questionnaire, yet the conversion of customers' perception into percentages has been made. The summary of feedback obtained as well as analysis of these responses is as under: Out of 82 customers interviewed in Bank A, 52 i.e. 64% of the customers are males and 30 i.e. 36% are females. 12% of the respondents are students; 36% of the respondents are self employed and 52% of them are salaried persons. Out of 82 customers, 38% have their income less than Rs.100000; 44% have their income between Rs.100000 to Rs.300000 and 18% have their income more than Rs.300000. 18% of the customers have their dealing with bank for less than one year; 34% of the customers are dealing with bank for past one year to three years and 48% of the customers have their dealing for more than three years. Majority of the customers in Bank A who were interviewed have dealing with the bank for more than three years. Out of 82 customers, 14% of them feel that services of this bank is extremely better; 22% feel that

services are better; 52% feel that services are same and 12% of customers feel that services of this bank is poorer than the other banks.

**Bank B:**

Out of 74 customers from Bank B who were interviewed, 41 i.e. 56% are males and 33 i.e. 44% are females. Out of 74 customers, 8% of the respondents are students; 28% of the respondents are self employed and 64% of them are salaried persons. 12% of total 74 customers have their income less than Rs.100000; 60% have their income between Rs.100000 to Rs.300000 and 28% have their income more than Rs.300000. 14% of the customers have their dealing with bank for less than one year; 30% of the customers are dealing with bank for past one year to three years and 56% of the customers have their dealing for more than three years. Majority of the customers who were interviewed have dealing with the bank for more than three years. The aim to have this data was to have the views of those customers who have been dealing with other banks too so that they could give their views keeping in mind the facilities available in other banks. In this exercise, Out of 74 customers, 54% of them feel that services of this bank is extremely better; 36% feel that services are better; 8% feel that services are same and 2% of customers feel that services of this bank is poorer than the other banks. 74% of customers are satisfied to large extent with services provided by Bank A while 22% are satisfied to some extent and 6% are not satisfied with the services provided by this branch.

**B. Analysis of Employee's Perceptions in Bank A and Bank B**

**Bank A:** For the purpose, 28 employees from Bank A, Chandigarh were interviewed. The breakup of these employees is: Out of twenty eight employees who were interviewed, eleven employees are of officer category; fourteen employees are subordinate and three employees are system administrator. 92% of the employees feel that computerization has helped to increase the business/profitability of the business; 8% of the employees feel that business has not increased due to computerization and none of the employees said that they have no idea about it. 84% of the employees have attended the training programme before/after computerization. But 16% have not received any training. The bank's business can be improved by giving proper training to them. Training programmes are helpful for employees to work in a computerized environment. 68% of the employees said that training is helpful for them to work in a computerized environment to large extent; 28% of the employees said that training is helpful to work in a computerized set up for them to some extent. It is better to give training to all employees for getting the best out of them and to expand branch efficiency and in turn for developing the business. When an updated version is loaded, refresher training should be given to them. Out of 28 employees, 88% of employees are saying that there are changes in reporting system, report is automatically prepared in the computer system according to daily, weekly and monthly requirement and the number of reports made during the year is decreased as information in one report is more in comparison to the reports which made manually. 12% of

employees have the view that there is no change in reporting system. Out of 28 BANK A employees interviewed, 64% said that they explain things rationally to the customers and try to convince them whenever any problem arises; 36% said that they adopt the policy of wait and watch because they don't have the knowledge of hardware and software and none of the employees try to flare up the issue whenever problem arises.

**Bank B:** For the purpose, 20 employees from Bank B, Chandigarh were interviewed. The breakup of these employees is: Out of twenty employees who were interviewed, six employees are of officer category; thirteen employees are subordinate and one is system administrator. The questionnaire to know the perceptions of employees was filled by these twenty employees in bank B. 94% of the employees feel that computerization has increased the business/profitability of the business; 6% of the employees feel that business has not increased due to computerization and none of the employees said that they have no idea about it. 82% of the employees have attended the training programme. But 18% have not yet received any training. Bank's business could be improved by giving proper training to them. Training programmes are helpful to employees in computerized work environment to a large extent. It is better to give training to all employees for getting the best out of them and to expand branch efficiency and in turn for developing the business. 80% of the employees said that training is helpful for them to work in a computerized environment to large extent; 18% of the employees said that training is helpful to work in a computerized set up for them to some extent and 2% of the employees said that there is no effect of training in their work environment. Out of 20 employees, 92% of employees are saying that there are changes in reporting system, report is automatically prepared in the computer system according to daily, weekly and monthly requirement and the number of report made during the year is decreased as information in one report is more in comparison to the manual reports. 8% of employees have the view that there is no change in reporting system. Out of 20 employees interviewed, 68% said that they explain things rationally to the customers and try to convince them whenever any problem arises; 32% said that they adopt the policy of wait and watch because they don't have the knowledge of hardware and software and no one try to flare up the issue whenever problem arises.

**Discussion and Conclusion**

It is evident that in improving customer services, management information system and ensuring high productivity, technology orientation has become inevitable. In creating a viable and efficient banking system, which can respond adequately to the needs of growing economy, technology has a key role to play. The technological challenge is to identify suitable areas of automation, selecting appropriate software and priorities the implementation on suitable and cost effective hardware so that in ultimate analysis, gains outweigh the cost.

It is revealed from the study that information technology has made a larger impact on the operational activities, services etc of the banks.

### Customer perceptions

- Majority of the customers in both banks who were interviewed have their dealing with the branch for more than three years.
- The customers having accounts in other banks feel that service of Bank A is almost same in comparison to other banks. On the other hand, the customers having accounts in other banks feel that services of Bank B is better than the services of other banks.
- The level of Satisfaction among customers with the services provided by the bank B is greater than bank A. This may be due to the long waiting hours, less efficient services and huge rush in the branches of bank A.
- The operational activities of both the banks have increased due to the computerization. Areas where operational activities become more effective: Statement of accounts, Transfer transactions, Accurate Enquiries about account balance, Secrecy of Accounts, Correct Balancing. Areas where operational activities are not so much improved: Collection of instruments, Pass book printing, Cash transactions and Cash department functioning.
- The attitude of staff in bank B is more positive than in bank A. As in bank A, generally employees help their customers just for the sake of their duty and they usually get irritated if customers ask more questions to them. On the other hand, in bank B, employees give personal attention to their customers, they offer services with the smiling face and sweet talk, show courtesy to their customers and also offer them tea, coffee etc.
- Majority of the Customers in both banks are satisfied with the introduction of core banking solutions at the branch. As CBS provide them with the right products at the right time through the right channels 24 hours a day, 7 days a week using technology aspects like Internet, Mobile ATM etc.
- In both bank A/bank B bank, the majority of customers noticed the increase in the level of their expenditure due to CBS system in the banks. This is because customers are spending their money lavishly. It is easy to access cash through ATMs, Debit Cards, Credit Cards etc. Earlier customers used to check their budget and make purchases or spend their money accordingly but now with CBS, they can access money any time they want to do any purchase without thinking of their budget which has resulted in increasing expenditure among employees.

### Employee perceptions

- Employees of both the banks feel almost same that computerization at the branch is easy and user friendly rather cumbersome and difficult to operate.
- Impact of full branch computerization on business efficiency & profitability is increased in both banks. Due to computerization, business efficiency is increased in following manner: prompt and accurate transaction, secrecy of accounts, correct balancing, accurate and neat pass book, less chance of frauds,

easy report generating system, less mental strain, the work has become easier. Information is readily available and easy to retrieve and employees can attend all the requirements of customers effectively.

- Most of the employees in both of the banks have attended the training programmes after the computerization of branches. Training results in increasing the awareness of employees and enables them to update themselves with the changing scenario in today's environment.
- These training programmes have also helped the employees of both banks to work in a computerized environment to the large extent. It is better to give training to all employees for getting the best out of them and to expand branch efficiency and in turn for developing the business and increasing profitability of banks.
- The reporting system of bank A/ B becomes more efficient due to computerization. The reports are prepared automatically with the computer according to the requirement of the bank A/B and report making has become easier in both banks. Number of reports made during the year is less in both banks because information is more in one report comparatively to the report which are made manually.
- According to the employees, the expectations of the customers from the bank after computerization have increased in bank A/bank B regarding efficient services, accurate and neat passbooks.
- The attitude of the customers after computerization is more friendly and satisfied in bank B than in bank A. On the other hand, the attitude of the customers is more demanding and taxing on the employees in bank A than in bank B.
- When there is some problem in computer system like things go wrong or beyond the control, the employees in bank B explain the things to customers rationally and try to convince the customers better than the bank A employees. But in bank A, employees usually adopt the policy of wait and watch to get the things right itself.

Hence, we can say that after the introduction of IT, there is a handsome growth in the business. But this expand in business/profitability could not be solely attributed to the computerization of branches. No doubt Computerization has played a key role in expanding the business. Still it is difficult to quantify the weightage. It was too early to expect miracles in the business as the branches are still grappling with the problems emerged because of IT, so let the system stabilize and then it would definitely prove more rewarding.

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