

IMPACT OF INFORMATION TECHNOLOGY IN IMPROVING EFFICIENCY OF BANKING SECTOR IN INDIA

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Abstract: *Entry of new banks resulted in a paradigm shift in the ways of banking in India, The growing competition, growing expectations led to increased awareness amongst banks on the role and importance of technology in banking. The arrival of foreign and private banks with their superior state of the art technology based services pushed Indian banks also to follow suit by going in for the latest technologies so as to meet the threat of competition and retain their customer base. Information Technology has basically been used under two different avenues in banking. One is Communication and Connectivity and other is business process re-engineering. Information technology enables sophisticated product development, better market infrastructure, and implementation of reliable techniques for control of risks and help the financial intermediaries to reach geographically distant and diversified markets.*
Keywords: *Banking technologies, re-engineering, control of risks, inclusive growth.*

I. INTRODUCTION

In the five decades since independence, banking in India has evolved through four distinct phases. During fourth phase, also called as Reform Phase, Recommendations of the Narasimham Committee (1991) paved the way for the reform phase in the banking. Important initiatives with regards to the reform of the banking system were taken in this phase. Important among these have been introduction of new accounting and prudential norms relating to income recognition, provisioning and capital adequacy, deregulation of interest rates and easing of norms for entry in the field of banking. In view of this technology has changed the contours of three major functions performed by banks, i.e., access to liquidity, transformation of assets and monitoring of risks. Further, Information technology and the communication networking systems have a crucial bearing on the efficiency of money, capital and foreign exchange markets. 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 Software Packages for Banking Applications in India had their beginnings in the middle of 80s, when the Banks started computerizing the branches in a limited manner. The early 90s saw the plummeting hardware PCs and servers and banks went in for what was called Total Branch Automation (TBA) Packages. The middle and late 90s witnessed the tornado of financial reforms, deregulation, globalization etc. coupled with rapid revolution in communication technologies and evolution of novel concept of 'convergence' of computer and communication technologies, like Internet, mobile/cell phones etc. Indian

Banking System has significant role in the economy. For sustainable growth of an economy, strong and healthy banking system should be needed. During the last decades, the advancement of technology and liberalization in the Indian banking sector leads to opening up of new markets, new banking products and most efficient and effective delivery channels in the banking industry of India.

II. OBJECTIVES OF THE STUDY

- To Study the impact of technology on banking sectors.
- To Study the impact of technology on community.
- To Study the impact of technology on employment opportunities.
- To Study the preference of people regarding the facilities provided by the banks.
- To satisfy the customer's needs.

III. RESEARCH METHODOLOGY

A research methodology defines what the activity of research is, how to proceed, how to measure progress, and what constitutes success.

Research design:

A research design is a framework or blueprint for conducting the marketing research project. It specifies the details of the procedures necessary for obtaining the information needed to structure and/or solve marketing research problem. It is a descriptive study. Initially I conducted an exploratory research for provision of insight of the current situation with less expenditure on time and resources. It also lends flexibility to the study and helps in discovering previously unrecognized insights. As a result, perspective regarding breadth of the variables operating in a situation is obtained. The results obtained as a result of this research have further used for descriptive research.

Sample Plan:

A sampling plan includes definition of

- Target population
- Sampling Area
- Sampling Size
- Sampling Technique

Sampling Area:

India's Capital New Delhi.

Sample Size:

Total sample size for this study is 50

25 for the banking employees and 25 for the professional and businessman.

Sampling Technique:

Stratified random sampling was the main sampling technique used by the researchers. The researchers allocated every commercial bank in India a number until all the banks had numbers to represent them. The papers with the numbers were put in a box and these were picked randomly until the targeted population was reached. The sample was representative and not biased. Since a given unit (commercial bank) was chosen only once, this strategy is an example of sampling without replacement. The researchers also used judgmental sampling thus the selection of the sampling units was consciously shaped by the researchers' agenda. Judgmental sampling was used for the selection of credit and corporate analysts, credit and corporate managers and heads of departments. The basis of the target population was based on the subjective instinct that those members would represent the entire group. This sampling technique was used because it is convenient, fast and relatively cheaper and conclusive judgments could be made on the work under the study.

Convenient sampling technique is used. In this study different people are taken from different areas like professionals, banking employees, businessman etc.

Data Collection:

The plank on which study rests is information, which has been procured as a judicious mix of both primary and secondary data.

Primary data was collected by means of a survey based on questionnaires and interviews. This was because questionnaires can produce large quantities of highly structured and standardized data. They also allow for free style of investigation, and pursuing particular issues in greater detail. Some of the questionnaires were administered through e-mail. E-mail allows the respondent to fill it out at their own convenience. It was relatively quick to collect information using questionnaires and it was possible to collect information from a large portion of the sample population. Interviews were conducted in a structured form to ensure consistency. An interview schedule was used. Both personal and telephone interviews were conducted. Structured interviews were more flexible and enabled the researchers to have control over the respondents so as to meet the researchers' objectives of the study.

Secondary data collection methods were used in-order to complement primary data by analyzing data that already existed from published sources like text books, journals, the internet and RBZ framework manuals, commercial bank's manuals and other reports. Main secondary data sources used included textbooks, Journals and the Internet. The internet was the most valuable source of information in this research. It provided data for both theoretical and empirical literature review. It was a source of most recent developments in local and global commercial banks.

IV. REVIEW OF LITERATURE

Based on the bank's hub and spoke architecture for the network, the branches are distributed under different regions and each major location has a regional hub. The branches falling under location connect to the hub at the main region.

These hubs then connect to the central site (data center) using a combination of 2 Mbps and 64 Kbps pipes, depending on the total volume of the transactions that pass through.

C.N. Ram (1996)

Head Information Technology, HDFC Bank says, "Each branch is connected to their regional hub, as to connect every branch directly to the data center involves huge costs. This kind of architecture helps save cost. "To balance the load and reduce the dependency on a single line. The bank has two hub locations within a region to share the load. The branches are split between the two hubs, so that one hub failure does not incapacitate all the branches in that region, "explained C.N.Ram.

S.R.BAL Subramanian (1992)

VP-IT, HDFC Bank explained the branch set up procedure. The bank follows a standard procedure and the entire process is well streamlined. From the selection of the location, physical set-up of the branch, the infrastructure requirements, hardware, software, connectivity, is all documented to have standardized branches across the country.

Anil Patrick R (1998)

An industry that is tightly protected by regulations has finally opened up. But this has introduced many new challenges. Here ia a look at how technology can help overcome those challenges and address the new set of issues associated with modern day banking by Anil Patrick R

Naresh Wadhwa (2003)

As naresh Wadhwa, Vice President West Cisco System (India) says. "It is very interesting to observe that no channel has replaced any of the others. Rather, they are complementing each other. The customer remains one, but over the years, there are multiple channels being developed like ATMs, callcenters, onlinebanking, mail/Fax, WAP, etc. The interesting trend is that customers are using all the available channels instead of settling for just one."

Discussions and analysis

Automated clearing house (AHC) origination:

ACH Origination allows businesses to automatically make and collect payments online and is ideal for any company that wants to streamline book keeping and reduce the hassle and expenses of making all payments by check. It works for everything from payroll disbursement via direct deposit to federal and state tax payments, business to business payments, charitable contributions and more. Companies save time and money by eliminating excessive check writing and handling, save costly "back-office" time by reducing the need for account reconciliation, reduce fraud exposure due to lost or stolen checks and get more accurate cash-flow projections by controlling timing of payments.

Remote deposit capture:

The Federal Reserve calls RDC, which is just starting to be

offered by community banks in metro Milwaukee, “the most important development the U.S. banking industry has seen in years.” With RDC, businesses use a desktop device to electronically scan received checks and securely transmit the scanned images to their bank deposit. It saves time for businesses by eliminating the need for daily runs to bring paper checks to the banks, and it also narrows the gap between the time a business receives a check and the time it has access to the actual funds. RDC gives businesses new flexibility to deposit checks outside of traditional bank hours, and there are a number of other security, money saving and convenience benefits as well.

Business information reporting:

Business information reporting gives a company greater control and oversight of its finances through a portfolio of online tools that provide real time snapshots of a company’s financial position. Management can control employee access and select appropriate accounts and activities based on the employee’s job function. The tools also allow companies with multiple divisions or affiliate organizations to see all of their account information combined within one view.

Payroll cards:

Payroll cards essentially reload able, pre-paid debit cards allow businesses to use direct deposit to pay employees without bank accounts. Businesses place the employee’s wages on the card each pay period, and the employee can use the card at any ATM or merchant that accepts debit cards. Payroll cards are a great way for businesses to streamline payroll operations and save money by eliminating paper paychecks and the associated administrative, printing, postage and storage costs.

Sweep services:

Sweep accounts maximize company funds and put cash management decisions on “auto-pilot” by automatically transferring any amount over a specified commercial checking account balance to where it benefits the business most. This could be to pay down a line of credit or add money to an investment tool like a repurchase agreement or money market mutual fund. For smaller businesses, which often don’t have the time or personal to make daily cash management decisions, sweeps allow the opportunity to realize higher returns on funds that would otherwise languish in a checking account.

These services each have their own advantages and they share one important characteristic. While preserving the security and accuracy of a company’s finances, they all cut down the hours spent with checkbooks, ledgers and bank statements. This allows business leaders more time to do what they do best serve their customers, mentor their employees and grow their businesses to their fullest potential.

Future of banking and technology:

According to C.N. Ram, the future is integration as people will have less time for banking. People will want to process more transactions on the internet. There will be more activity in terms of applications and services on the mobile.

Geography will not be an inhibitor any more as everything is executable on the internet.

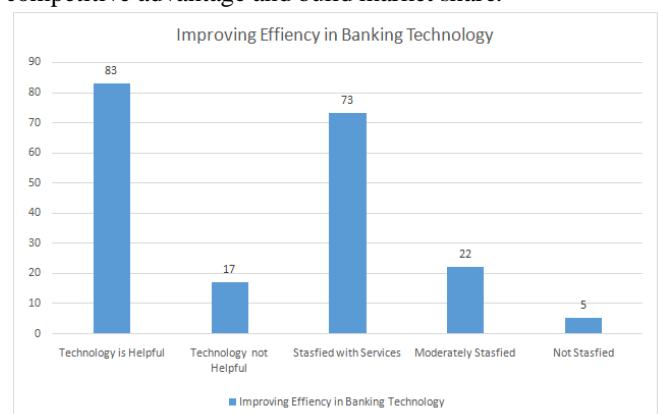
Integration is the next real big thing. As a customer you will want a one stop shop that will take care of all your needs. For instance people will want to buy their mutual funds, redeem their mutual fund, buy insurance policies, renew policies, and buy cinema tickets, railway tickets and numerous similar transactions through the bank. The ATM will still serve as a cash dispensing medium, but the internet and mobile will be very active”, says C.N. Ram.

Cost of infrastructure is coming down considerably. Service providers are providing alternative routes to customers and prices are coming down, as there is healthy competition in the market. Bulk purchases will result in affordable prices.

I have found 83% people said that technology is helpful in improving efficiency of the banking sector, but 17% said that it does not help any more. By analyzing the value of automation for the community. I have found that 73% of people said that they are satisfied with the services and benefits provided by automation. 22% of people said that it serves us moderately but 5% of people said not at all about these criteria.

Banks operate in a highly automated environment in terms of Information Technology and Communications systems. All the bank’s branches have online connectivity, which enables the bank to offer speedy funds transfer facilities to its customers. Multi branch access is also provided to retail customers through the branch network and Automated Teller Machines (ATMs). The bank has made substantial efforts and investments in acquiring the best technology available internationally, to build the infrastructure for a world class bank. The Bank’s business is supported by scalable and robust systems which ensure that our clients always get the finest services we offer.

The Bank has prioritized its engagement in technology and the internet as one of its key goals has already made significant progress in web enabling its core businesses. In each of its businesses, the bank has succeeded in leveraging its market position, expertise and technology to create a competitive advantage and build market share.



As per my primary data, I found 62% of people said that they are satisfied with criterion that automation is minimizing the values of workers like one machine can do manage the work of 10 workers. It reduces the value of workers. But 31% of people said that they are not satisfied with this and 7% of

people don't have any view about it. According to people as a source of primary data about this modern technology, 21% of people think that today's automation is only a sign of modernization. It doesn't serve the people of lower classes. They are also in the favour of traditional banking that was beneficial to all classes of society. 58% of people said that are bad effects of technology on employment opportunities and 42% of people said that there are no bad effects of technology on employment opportunities. 72% of people said that there will be surely a bright future of banks 11% of people said that there is an average and 17% of people said that there will be a bad future causes of the cost and misleading the employment opportunities.

Indian Banking Industries:

The Indian banking market is growing at an astonishing rate, with assets expected to reach US\$ 1 trillion by 2010. An expanding economy, middle class and technological innovations are all contributing to this growth. The country's middle class accounts for over 320 million people, in correlation with the growth of the economy, rising income levels, increased standards of living, and affordability of banking products are promising factors for continued expansion. The Indian banking industry is in the middle of an IT revolution, focusing on the expansion of retail and rural banking. Players are becoming increasingly customer centric in their approach, which has resulted in innovative methods of offering new banking products and services. Banks are now realizing the importance of being a big player and are beginning to focus their attention on mergers and acquisitions to take advantage of economies of scale and/or comply with Basel II regulation. Indian banking industry assets are expected to reach US\$ 1 trillion 2010 and are poised to receive a greater infusion of foreign capital, says Prathima Rajan, analyst in Celent's banking group and author of the report. "The banking industry should focus on having a small number of large players that can compete globally rather than having a large number of fragmented players."

Milestones:

In India, banks as well as other financial entities entered the world of information technology and with Indian Financial Net (INFINET). INFINET, a wide area satellite based network (WAN) using VSAT (Very Small Aperture Terminals) technology, was jointly set up by the Reserve Bank and Institute for Development and Research in Banking Technology (IDRBT) in June 1999.

The Indian Financial Network (INFINET) which initially comprised only the public sector banks was opened up for participation by other categories of members. The first set of applications that could benefit greatly from the use of technological advances in the computer and communications area relate to the Payment systems which form the lifeline of any banking activity. The process of reforms in payment and settlement systems has gained momentum with the implementation of projects such as NDS (Negotiated Dealing System), CFMS (Centralized Funds Management System) for better management by banks and SFMS (Structured Financial Messaging Solutions) for secure message transfer. This

would result in funds transfer and funds related message transfer to be routed electronically across banks using the medium of the INFINET. Negotiated dealing system (NDS), which has become operational since February 2002 and RTGS (Real Time Gross Settlement System) scheduled towards the end of 2003.

Internet has significantly influenced delivery channels if the banks. Internet has emerged as an important medium for delivery of banking products and services. Detailed guidelines of RBI for Internet banking has prepared the necessary ground for growth of Internet banking in India. The Information Technology Act, 2000 has given legal recognition to creation, transmission and retention of an electronic (or magnetic) data to be treated as valid proof in a court of law, except in those areas, which continue to be governed by the provisions of the Negotiable Instruments Act, 1881. As stated in RBI's Annual Monetary and Credit Policy 2002-2003.

Limitations of the study

The study suffers from the following limitations. Few of the noticeable ones have been mentioned below:-

- The sample size selected (banks and customers) might not depict a true picture of the population.
- Some of the customers could not provide all required all required information so the conclusions may not be wholly true.
- Time was a very big limiting factor, because of the very limited respondent were conducted.
- It is difficult to get the respondents to answer the questions honestly.
- It is difficult to get appointments from banks senior executives.
- Bank employees may give biased answers which may lead to incorrect results.
- Time available for the completion of the project was limited.
- Survey was mostly based on human perceptions related to various factors, which may lead to a subjective result.

V. CONCLUSION

Some people said that there is an important role of automation in improving the efficiency of banking sector but some said that it serves this sector little more. 47% people think that technology helps in saving the time, 18% said that it helps in facing the competitions, 35% said that it is a source of comfort. Some people said that automation is beneficial because it provides us services like ATM's and online transactions, but some said that there are moderate benefits of technology. Some people said that it very much serves their values by providing them facilities, some said that it serves us moderately, but some people do not have their views about it. 62% people said that they are strongly agree that automation is minimizing the values of workers, 31% said that they are disagreed and 7% said that they cannot say about it. Most of the people think that automation is only a sign of modernization. It does not serve the community at all

but most said that it really gives the values. Most of the people think that there is a bad effect of automation on employment opportunities and it minimizes the value of workers but some said that it does not affect the workers values. Some people said that automation is everything for the banking sector but some said that it is moderate important for banks. 33% people said that they are paying some extra cost for use of this automation but 77% said that they do not pay extra cost. Most people think that there will surely bright futures of banks with this automation and mostly said that there will be an average, cause of some misleading effect on worker's values.

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