

Technological Innovations in Banking Sector : Impact, Behaviour and Services

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This paper would include the impact of e-banking on consumer's behaviour to e-service quality. Initiation of Information Technology and Communications networking system was done to change the operating environment of banks drastically. Technology has already enabled some of the banks to introduce innovative products to their customers in the form of ATM facility, Telebanking , Home Banking, 'Anytime' and 'Anywhere' banking, etc. The changes brought about by IT (Information Technology), new products, more sophisticated customers, changing cost structures, and enhanced competitive pressures have all combined to transform the structure of the banking industry .Customers of banks have felt the positive impact of technological solutions implemented by banks. The customers of banks of today have a virtual menu of options as far as delivery channels are concerned and all these are the benefits of technology. With the most visible benefits happening in the areas of payments for retail transactions, a variety of cards, Automated Teller Machines, Electronic based funds transfers, Internet banking, Mobile banking are all some of the latest technology based payment solutions, which have gained large acceptance amongst the Indian banking public.

This paper would also include a critical review of the organizational literature regarding the impact of e-banking on banks' performance to examine if banks have successfully achieved customer's satisfaction, by providing high level of quality service through online delivery channel, besides operating cost minimization and revenue maximization.

Also we can see that (ICT) has become the heart of banking sector, while banking industry is the heart of every robust economy. If it collapses so will the economy.

Also we would further study the impact of ICT on banks' performance to examine if banks have successfully achieved effective customer's service delivery, by providing high level of customer service through online delivery channel, besides operating cost minimization and revenue maximization.

Keywords : ICT, E-banking, E-service, Innovations

E-business has been continuously growing as a new industry during the last decade (Van Hoeck, 2001). The banking industry has been leading this trend in recent years, and now all banking transactions completing through internet applications is sometimes called e-banking. Some key issues addressed in the recent literature about the e-banking include: customer acceptance and satisfaction, privacy concerns, profitability, operational risks, and competition from nonbanking institutions (Boss et al., 2000; Smith, 2006; Hwang et al., 2007; Shin, 2008). E-banking has revolutionised the way business is transacted by globalising the business enterprise. E-banking technologies have proliferated in recent years, and the availability of a wide range of products has led to increasing adoption among consumers. These technologies include direct deposit, computer banking, stored value cards, and debit cards (Servon and Kaestner, 2008). Consumers are attracted to these technologies because of convenience, increasing ease of use, and in some instances cost savings (Anguelov et al., 2004). E-banking, in particular, has grown at impressive rates. All businesses, including small and medium scale industries, no matter their geographical locations, are all beneficiaries of e-banking. It encompasses all kinds of commercial transaction that is conducted on an electronic medium, mostly through the internet. E-banking links business to customers no matter their geographical location.

Smaller community banks, among others, are more interested in the application of e-banking to gain certain competitive edges over their larger counterparts (Yang et al., 2007). In addition to previous e-banking delivery systems, Automated Teller Machines (ATMs) and telephone transaction processing centres, online banking provides banks a new and more efficient electronic delivery tool (Costanzo, 2000). While ATMs were first introduced in early 1980s and initially an attempt to reduce operating costs, telephone call centres were developed in the 1990s to handle simple transactions and provide added customer services from a remote location. E-banking has been viewed as an upgrading from previous electronic delivery systems to open new business opportunities for the banking industry

Technology

Computers are getting more sophisticated. They have given banks a potential they could only dream about and have given bank customers high expectations. The changes that new technologies have brought to banking are enormous in their impact on officers, employees, and customers of banks. Advances in technology are allowing for delivery of banking products and services more conveniently and effectively than ever before - thus creating new bases of competition. Rapid access to critical information and the ability to act quickly and effectively will distinguish the

successful banks of the future. The bank gains a vital competitive advantage by having a direct marketing and accountable customer service environment and new, streamlined business processes. Consistent management and decision support systems provide the bank that competitive edge to forge ahead in the banking marketplace.

Major applications: The advantages accruing from computerization are three-directional - to the customer, to the bank and to the employee.

For the customer: Banks are aware of customer's need for new services and plan to make them available. IT has increased the level of competition and forced them to integrate the new technologies in order to satisfy their customers. They have already developed and implemented a certain number of solutions among them:

- Self-inquiry facility: Facility for logging into specified self-inquiry terminals at the branch to inquire and view the transactions in the account.
- Remote banking: Remote terminals at the customer site connected to the respective branch through a modem, enabling the customer to make inquiries regarding his accounts, on-line, without having to move from his office.
- Anytime banking- Anywhere banking: Installation of ATMs which offer non-stop cash withdrawal, remittances and inquiry facilities. Networking of computerized branches inter-city and intra-city, will permit customers of these branches, when interconnected, to transact from any of these branches.
- Telebanking: A 24-hour service through which inquiries regarding balances and transactions in the account can be made over the phone.
- Electronic Banking: This enables the bank to provide corporate or high value customers with a Graphical User Interface (GUI) software on a PC, to inquire about their financial transactions and accounts, cash transfers, cheque book issue and inquiry on rates without visiting the bank. Moreover, LC text and details on bills can be sent by the customer, and the bank can download the same. The technology used to provide this service is called electronic data interchange (EDI). It is used to transmit business transactions in computer-readable form between organizations and individuals in a standard format.

As information is centralized and updates are available simultaneously at all places, single-window service becomes possible, leading to effective reduction in waiting time.

For the bank: During the last decade, banks applied IT to a wide range of back and front office tasks in addition to a great number of new products. The major advantages for the bank to implement IT are:

- Availability of a wide range of inquiry facilities, assisting the bank in business development and follow-up.

- Immediate replies to customer queries without reference to ledger-keeper as terminals are provided to Managers and Chief Managers.
- Automatic and prompt carrying out of standing instructions on due date and generation of reports.
- Generation of various MIS reports and periodical returns on due dates.
- Fast and up-to-date information transfer enabling speedier decisions, by interconnecting computerized branches and controlling offices.

For the employees. IT has increased their productivity through the followings:

- Accurate computing of cumbersome and time-consuming jobs such as balancing and interest calculations on due dates.
- Automatic printing of covering schedules, deposit receipts, pass book / pass sheet, freeing the staff from performing these time-consuming jobs, and enabling them to give more attention to the needs of the customer.
- Signature retrieval facility, assisting in verification of transactions, sitting at their own terminal.
- Avoidance of duplication of entries due to existence of single-point data entry.

Mobile Banking

Despite this rise in m-banking transactions in India, banks are yet to fully exploit this technology even for their existing customers. The current penetration is low compared to the number of bank accounts and the vast mobile subscriber base of more than 900 million. Some of the reasons for which consumers are not adopting mobile banking include the lack of adoption of mobile as a channel for banking, limitations of services on mobile banking, non-replication of mobile banking services in varied languages in India etc. Most mobile banking applications are designed for smart phones, which also limits the customer base, but with the introduction of USSD-based applications, this may change in coming years. Mobile banking can be classified as follows: In an environment which has a paucity of advanced technology and mobile handset capabilities a one-size-fits-all solution does not work. Therefore, there is a need for banks to make investments on mobile banking applications like custom applications, mobile browser, etc to offer mobile banking services to cater to various mobile / tablet platforms like iOS, Android etc which are available on high-end phones / tablet platforms with good processing capabilities while at the same time offer services like USSD to the low-end segment having java based phones with limited data processing capabilities. There have been various developments over the past year in the mobile banking space including new strategic partnership models (like banks and telcos) and products / services (Inter Bank Mobile Payment System (IMPS), National Unified USSD Platform (NUUP), etc) emerging in the Indian markets. M - Banking has lowered some of the key barriers to financial inclusion in India by reducing start-up costs and service prices. Eko India Financial Services, as

business correspondent provides bank accounts, deposit, withdrawal and remittance services, micro-insurance, and micro-finance facilities to its customers (nearly 80% of whom are migrants or the unbanked section of the population) through mobile banking.

Electronic Payments

The Indian payment system, which is primarily cash dominant, is now at a faster pace transforming from paper to electronic. The share of electronic payments in non-cash payments has shown an upward trend. The electronic payment system primarily comprises Real Time Gross Settlement (RTGS), Electronic clearing services (ECS), credit and debit payments and electronic fund transfers (EFTs) / National Electronic Funds Transfer (NEFT).

C2G (Consumer to Government) & G2C (Government to Consumer) Payments remain the focus area for the regulator and government alike, both to drive inclusion and increase efficiencies in payment processing and collections. The e-commerce and m-commerce platforms are poised for a big stride in coming years. The Indian payment system, which is primarily cash dominant, is now at a faster pace transforming from paper to electronic. The share of electronic payments in non-cash payments has shown an upward trend. The electronic payment system primarily comprises Real Time Gross Settlement (RTGS), Electronic clearing services (ECS), credit and debit payments and electronic fund transfers (EFTs) / National Electronic Funds Transfer (NEFT).

Conclusion

IT today has become integral to the business of banking; it is difficult to envision one without the other. However as with other resources it has costs attached to it and with substantial investments in IT infrastructure business leaders will have to seek answers to whether the infrastructure is being used optimally. The overall and marginal value that IT delivers in terms of business impact, be it growth or profitability or any other parameter, will become increasingly important. Technology should be customer centric to derive optimal benefits and banks will have to equally focus on customer retention and increasing share of wallet rather than only acquisition. For most of banking customers going back to their primary bank for any other new relationship is a major challenge. This is due to the insufficiency of CRM and BI solutions. Data integration of customer interaction through multiple channels is still not available to front end branch personnel. With increased use technology also comes increased risk of security breaches. Banks will have to on their toes with real time alert systems and governance policies to manage the threats for early detection and damage control. In addition banks will also need to focus on operational performance improvement including training, workflow automations and business process re-engineering to simplify process flows for increased return from technology. The future IT vision and strategy of banks will have to balance value delivered to the firm. It will need to be aligned to the strategic objectives of the firm and be accountable for the delivering desired value.

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