

THE IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ON COMMERCIAL BANK PERFORMANCE

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Abstract

This paper contributes to the ongoing debate regarding the contribution of Information and Communication Technology (ICT) to firm's performance. As the ICT impact on bank performance is beyond the scope of most similar studies, this study further investigates the impact of Information and Communication Technology Cost Efficiency (ICTCE) on the performance of banks as well. The study assessed the impact of ICT on the performance of Indian banking industry using annual data over the period 1990-2012 published by Bank scope – World banking information source. Data analysis is carried out in a dynamic panel environment using the orthogonal transformation approach. The findings of the study indicated that the use of ICT increases return on capital employed as well as return on assets of the Indian banking industry. The study discovers that more of the contribution to performance comes from information and communication technology cost efficiency compared to investment in information and communication technology. The study recommends that banks emphasize policies that will enhance proper utilization of existing ICT equipment rather than additional investments.

Keywords: return on assets, return on capital employed, information and communication technology cost efficiency, performance.

Introduction

During the past decade, the ICT rapidly increases communication source in banking industry. There are various forms of Information and communication technological innovations and electronic delivery channels which are adopted by banks. ICT innovations have been identified to contribute to the effective distribution channels of Banks. The electronic delivery channels are collectively referred to as Electronic Banking. ICT on banking is really not one technology, but an attempt to merge several different technologies. Each of these evolved in different ways, but in recent years different groups and industries have recognized the importance of ICT usage working together. Bankers now see a kind of evolution in their business, partly, because the world has taken a quantum leap in the use of ICT in the past several years. New electronic services adopted by banks such as online retail banking are making it possible for very small institutions to take advantage of new technologies at quite reasonable costs. These developments may ultimately change the competitive landscape in the financial services.

Information and Communication Technology

Information Technology (IT) is the automation of processes, controls, and information production using computers, telecommunications, software and ancillary

equipment such as automated teller machine and debit cards (Khalifa 2000). It is a term that generally covers the harnessing of electronic technology for the information needs of a business at all levels. Irechukwu (2000) lists some banking services that have been revolutionized through the use of ICT as including account opening, customer account mandate, and transaction processing and recording. Information and Communication Technology has provided self-service facilities (automated customer service machines) from where prospective customers can complete their account opening documents direct online. It assists customers to validate their account numbers and receive instruction on when and how to receive their cheque books, credit and debit cards.

Communication Technology deals with the Physical devices and software that link various computer hardware components and transfer data from one physical location to another (Laudon and Laudon; 2001). ICT products in use in the banking industry include Automated Teller Machine, Smart Cards, Telephone Banking, MICR, Electronic Funds Transfer, Electronic Data Interchange, Electronic Home and Office Banking. Several authors have conducted investigation on the impact of ICT on the banking sector of the Nigeria economy. Agboola et al (2002) discussed the dimensions in which automation in the banking industry manifest in Nigeria. They include:

1. Bankers Automated Clearing Services: This involves the use of Magnetic Ink Character Reader (MICR) for cheque processing. It is capable of encoding, reading and sorting cheques.
2. Automated Payment Systems: Devices used here include Automatic Teller Machine (ATM), Plastic Cards and Electronic Funds Transfer.
3. Automated Delivery Channels: These include interactive television and the Internet.

Recent Developments of Banking Sector in India Internet

Internet is a networking of computers. In this marketing message can be transferred and received worldwide. The data can be sent and received in any part of the world. In no time, internet facility can do many a job for us. It includes the following:

- This net can work as electronic mailing system.
- It can have access to the distant database, which may be a newspaper of foreign country.
- We can exchange our ideas through Internet. We can make contact with anyone who is a linked with internet.
- On internet, we can exchange letters, figures/ diagrams and music recording.

Internet is a fast developing net and is of utmost important for public sector undertaking, Education Institution, Research Organization etc.

Automated Teller Machine (ATM)

ATM is an electronic machine, which is operated by the customer himself to make deposits, withdrawals and other financial transactions. ATM is a step in improvement in customer service. ATM facility is available to the customer 24 hours a day. The customer is issued an ATM card. This is a plastic card, which bears the customer's name. This card is magnetically coded and can be read by this machine. Each cardholder is provided with a secret personal identification number (PIN). When the customer wants to use the card, he has to insert his plastic card in the slot of the machine. After the card is recognized by the machine, the customer enters his personal identification number. After establishing the authentication of the customers, the ATM follows the customer to enter the amount to be withdrawn by him. After processing that transaction and finding sufficient balances in his account, the output slot of ATM give the required cash to him. When the transaction is completed, the ATM ejects the customer's card.

Cash Dispensers

Cash withdrawal is the basic service rendered by the bank branches. The cash payment is made by the cashier or teller of the cash dispenses is an alternate to time saving. The operations by this machine are cheaper than manual operations and this machine is cheaper and fast than that of ATM. The customer is provided with a plastic card, which is magnetically coated. After completing the formalities, the machine allows the machine the transactions for required amount.

Phone Banking

Customers can now dial up the bank's designed telephone number and he by dialing his ID number will be able to get connectivity to bank's designated computer. The software provided in the machine interactive with the computer asking him to dial the code number of service required by him and suitably answers him. By using Automatic voice recorder (AVR) for simple queries and transactions and manned phone terminals for complicated queries and transactions, the customer can actually do entire non-cash relating banking on telephone: Anywhere, Anytime.

Tele-banking

Tele banking is another innovation, which provided the facility of 24 hour banking to the customer. Tele-banking is based on the voice processing facility available on bank computers. The caller usually a customer calls the bank anytime and can enquire balance in his account or other transaction history. In this system, the computers at bank are connected to a telephone link with the help of a modem. Voice processing facility provided in the software. This software identifies the voice of caller and provides him suitable reply. Some banks also use telephonic answering machine but this is limited to some brief functions. This is only telephone answering system and not Tele-banking. Tele banking is becoming popular since queries at ATM's are now becoming too long.

Internet Banking

Internet banking enables a customer to do banking transactions through the bank's website on the Internet. It is a system of accessing accounts and general information on bank products and services through a computer while sitting in its office or home. This is also called virtual banking. It is more or less bringing the bank to your computer. In traditional banking one has to approach the branch in person, to withdraw cash or deposit a cheque or request a statement of accounts etc. but internet banking

has changed the way of banking. Now one can operate all these type of transactions on his computer through website of bank. All such transactions are encrypted; using sophisticated multi-layered security architecture, including firewalls and filters. One can be rest assured that one's transactions are secure and confidential.

Mobile Banking

Mobile banking facility is an extension of internet banking. The bank is in association with the cellular service providers offers this service. For this service, mobile phone should either be SMS or WAP enabled. These facilities are available even to those customers with only credit card accounts with the bank.

Any where Banking

With expansion of technology, it is now possible to obtain financial details from the bank from remote locations. Basic transaction can be effected from faraway places. Automated Teller Machines are playing an important role in providing remote services to the customers. Withdrawals from other stations have been possible due to inter-station connectivity of ATM's. The Rangarajan committee had also suggested the installation of ATM at non-branch locations, airports, hotels, Railway stations, Office Computers, Remote Banking is being further extended to the customer's office and home.

Impact of Information Technology on Indian Banking System

The banking system is slowly shifting from the Traditional Banking towards relationship banking. Traditionally the relationship between the bank and its customers has been on a one-to-one level via the branch network. This was put into operation with clearing and decision making responsibilities concentrated at the individual branch level. The head office had responsibility for the overall clearing network, the size of the branch network and the training of staff in the branch network. The bank monitored the organisation's performance and set the decision making parameters, but the information available to both branch staff and their customers was limited to one geographical location.

Challenges Faced By Indian Banking Scenario in India Business Challenges

1. Meet customer expectations on service and facility offered by the bank.
2. Customer retention.
3. Managing the spread and sustain the operating profit.

4. Retaining the current market share in the industry and the improving the same.
5. Completion from other players in the banking industry.

Other Important Operational Challenges

1. Frequent challenges in technologies used focusing up grades in hardware and software, attending to that implementation issues and timely roll out.
2. Managing technology, security and business risks.
3. System re-engineering to enable. Defined and implemented efficient processes to be able to reap benefits off technology to its fullest potential.
4. Upgrading the skill of work force spread across the country.

Emerging Trends of Information Technology in Banking Sector

At corporate level to meet the challenges, various initiated have been taken and implementation is process beside up gradation of data centre facilities:

Centralization of functions

Inward clearing data uploading and processing Check book issues MIS-On-Line Monitoring/ Generation of statement by controlling offices Audit from the remote location Sending mails and statement of accounts to customers & completion of non-mandatory field in newly opened accounts.

- Single Window System
- Revised Account opening form for capturing complete customer/ Account data as per CBS requirement.
- Call centre for customers.
- Customer Relationship Management (CRM) Application.
- Data Warehousing.

To facilitate successful implementation of the above initiative, intensive efforts are to be undertaken by all of us on following issues:

- Completion of correct MIS details in all accounts and SRM's
- Customer / Account data completion / correction.
- Customer-ID crystallization.
- Aggressive marketing of Internet Banking & Debit Card products to increase share of delivery channels transaction.
- Skill up gradation & increase in awareness of all staff member.
- Strict compliance of Circular & Guidance available online (CBSINFO) / Messages issued through scrolling ticker on login page.

Present slowdown in rollover must be put to full use to have concrete action on these fronts.

Conclusion

Information Technology enables sophisticated product development, better market infrastructure, implementation of reliable techniques for control of risks and helps the financial intermediaries to reach geographically distant and diversified markets. Internet has significantly influenced delivery channels of the banks. Internet has emerged as an important medium for delivery of banking products and services. Information, communication and networking, achieving inter branch connectivity, moving towards Real Time gross settlement (RTGS) environment the forecasting of liquidity by building real time databases, The shift from traditional banking to e-banking is changing customer's expectations. With the globalization trends world over it is difficult for any nation big or small, developed or developing, to remain isolated from what is happening around. For a country like India, which is one of the most promising emerging markets, such isolation is nearly impossible. More particularly in the area of Information technology, where India has definitely an edge over its competitors, remaining away or uniformity of the world trends is untenable. Financial sector in general and banking industry in particular is the largest spender and beneficiary from information technology. This endeavours to relate the international trends in it with the Indian banking industry.

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