

Role of ICT in Banking Sector

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Abstract:

Information technology (IT) and Information Communication Technology (ICT) has increasingly becoming an invaluable tool and technique economic and commodity development of a nation. The banking sector around the world are considering the Information technology (IT) it as becomes most powerful tool to improve and extension of customer service quality, reducing cost and speed up the banking operations, increase usage of banking products and services, easy attract customer to bank, easy to evaluate the performance of bank, easy to analyse weakness of the employees through user analysis, reaching global market, save the time of management, employee and also customer, improve professional efficiency of staff, increase productivity and enhancing competitiveness, easy to interact and interconnect sub-branches and effectively & efficiently provide service quality meet customer needs and expectations and also increase efficiency of management, bank and employee in this competitive world.

Key words: IT, ICT, Efficiency and Productivity

Introduction:

The development of economy depends on financial system of the country; development of financial system depends on functions of financial institutions. Functions of banking depend on adaptation of Information Communication of Technology (ICT). Hence, both the developed and under developing countries in the world, banking sector is showing more interest to use and adoption of ICT advancements in all its areas of functionalities

and operations. Also, the Indian banking sector is not lagging behind in adoption of ICT applications value add services in the banks. The vigorous growth and development of Indian banking sector can be attribute in utilization and adoption of ICT in all type of financial institutions.

The commercial banks are in good position to adopt ICT and they have been succeeding in revolutionizing the banking sector. But in the case of co-operative bank and also public sector banking system in the country found to be lagging behind in interest and adoption of ICT. It has inculcate with Indian banking sectors to facilitated more value added services and facilities for betterment the existing banking system and improve the security measures in financial operations and offering innovative products being reach to customers doorsteps. It enthuse, now most of the research studies have been undergoing to assess the status of adoption of ICT in banking sectors, in other, some studies ongoing to examine the customer awareness and usage of 'net-banking, online banking, web based services offered by both scheduled and non- scheduled banks in Indian states jurisdictions.

The vigorous growth and development in banking sector is inculcate and attribute in utilization of advancement ICT applications, tools and facilities by both scheduled and non- scheduled banks of a country. Thus, ICT and its innovative service apps and applications have become a crucial elements and components in development economy. In co-operative banking system, Information technology (IT) is create new opportunities as well challenges for all kind of banks whether the StCBs, DCCBs and UCBs to leapfrog earlier stages of development and improvement the existing system. Therefore, the emerging developing country like India is needs realise about importance of ICT and adopt it practices. Other than they fall further behind and it expand gap they have with the commercial banks get wider than co-operative banks, because these co-operative banks are always engaging to enforce to agriculture sectors and empowering rural economy. India is basically agriculture dependence country and most of the people are living rural areas, over 60% of rural India even today most depends on co-operative or public sector banks to fulfil their financial needs. Hence, the traditional banking system facilities is difficult reach to people of rural areas, if reach, but most of them are not aware about innovative services and facilities provide by the banks. This is the case; the co-operative banking system in India need more concentrate to enhance the existing system with adopt ICT advancement and reach service to last layer of the people.

Now, instead of commercial banks, public sector and co-operative banks in India had realised to adopt ICT applications in their banks and try providing qualitative services to facilities for both urban as well as rural

communities. For that, they have approach to some corporate agencies or companies and also National Information Centre (NIC), Government IT agency of India to design and development of technological enabled applications, platforms, WebPages and mobile enabled apps to provide web-based services to their customer.

Application of ICT in Banks

The impact of ICT, now most of the co-operative banks are functioning associated with innovative technological applications, tools, portals and platforms. In this following section, the researcher is brief about apps and applications which are might be used by the public, academic, agriculture and also banking sector in India.

Web-Pages

Nowadays individual web-pages (website), information or service portal and access gateways are becoming very essential to all banks to showcasing information about personal, public, academic and service orientated information. It acts as reflection mirror of internal and external functions and activities have been carried out by the respective co-operative banks and providing information as changing needs of customers. As observed that most of the co-operative banks do not have well informative WebPages to know banking services, i.e., accounts provisions, types of loans, interest and recovery mode and access facilities provide by consult banks. Hence, all banks should design well customer interface Webpage for each bank or community entities. Then, these websites, information portals, gateways, blogs, networking sites and individual news channels and other information dissemination channels have provisions promoting the extended range of information resources and services with break the traditional systems of co-operative banks.

Mobile Apps and applications

Behind purpose of increase efficiency and effectives, betterment of banking service, banking service should reach to customers, service provide on 24×7 basis, attract to customers to Bank, increase customer satisfaction and importantly survive in the this competitive world. Now most of the banks are try to modern their existing banking with use available ICT advancement applications. Hence now most of the banks have designed their own colourful websites and along that they have design and development of mobile enabled apps and applications to effective reach to customer, especially young generations whoever always interconnecting with smart phones. Some of well known banks have designed their own mobile apps, i.e., Reserve Bank of India, BHIM, Digital Payments (Kannada, English), Digital Payment India, Digital India Payments Pro, Digital Pay Ind, YONO by SBI, SBI-

Card, SBI-REMIT, BHIM SBI Pay, iMobile Pay by ICICI Bank, Digital Pay by AEPS Network, Paytm -UPI, DakPay UPI by IPPB, HDFC Bank MobileBanking, RBL Bank MoBank 2.0 Mobile Banking, Kotak - 811 & Mobile Banking, Paytm -UPI, PhonePe – UPI, Online Seva, Citibank IN, HSBC India, Village Digital India, Rupenet Payments, U-Mobile, IndOASIS - Indian Bank Mobile Banking and other many more financial institution, centres and lending institutions were create their own mobile apps enables banking service to customer doorsteps. In co-operative banks case, only few more banks are providing this kind of mobile based service to their customer, it is very poor, if it comparing with other commercial banks, private and some of public sectors banks of India.

e- Wallet

A smart type of electronic card which is used for online transaction via computer, laptop, smart phone or other smart electronic devices, it needs to be linked with the bank accounts to make digital transactions. This application component stores information and encryption of the data where personal banking information provided by the customer which includes, name, postal address, mode of payment, money to be paid, debit or credit card details.

Internet / Net Banking

Net-banking similarly called as ‘online banking’, ‘internet banking’ and also called it as ‘Mobile banking’ it is determine that ‘bank on finger’ or ‘bank on hand’ or ‘bank on pocket’. Now-a-days most of the scheduled or non-scheduled banks have been facilitate this kind of personal banking service for all individuals and groups. Net banking system is enables customers or institutes access to all banking services and facilities, i.e., funds transfer, digital payment, shopping, online market and other financial services. The will typically connect to core banking system that operated by a bank to provide customer or institute access to banking services from place of traditional branch banking. This service of the bank is radically improve the performance of a bank, offers greater convenience to customer in term of make use of banking services when they need. Hence, all the co-operative banks should give foremost priority for provide net-banking facility to view account balance, bank statement, credit loan EMI’s, checking banking transaction and funds transfer on loan or making payment.

Telephone Banking

It is an emerging concept of bank computerisation system of bank. This service is provide with help of telephone, a 10 digit toll free number is assigned to particular bank and the bank should create a customer service centre at central entity and deputes a person to give furnish information about all banking products, innovative services and facilities that are being launched and practicing by banks. The banking customer from across the world can access to banking service over phone on 24×7×365 uptime.

Voice Mail Service (VMS)

Some of the co-operative banks have also launched the VMS service is facilitated to their customer. This advanced service must help for whoever is stay their remote areas and whoever are illiterate members to bank. In this system, every service caretaker has voice mail post box for storage of data; they can un-mute live calls if they need to go out for lunch or other purpose. When they come back, then mute service, listen provide assistance to massages which are recorded inbox of VMS device.

But it is very difficult to adopt, especially in India, because we seems that peoples are talking different vernacular local languages. Hence, it becomes more difficult to provide service in all languages.

RBI: File-Tech

The RBI: File-Tech is a 'start-ups' output in banking industry. File-Tech had designed to make financial system and delivery of financial services more efficient. This is kind of service can enable new business model, applications, process and products with an associate materials effects on financial market strategies and financial institutions and provisions of their financial services.

RBI-MANI App

Mani called 'Mobile Aided Notes Identifier (MANI)' application was launched by RBI with concern of visually challenged persons. It most helps them to indentify the demonization of currency notes and thereby facilitating their routine financial transaction. This app technology has been new opportunities for making Indian bank notes more accessible for the visually challenged peoples.

Digital Payment Initiations

Recently, the RBI revealed that a slew measure targeted to enhance digital payments, boost the scope of priority banking sector lending and drive innovation in the boarder of financial system. In this connection, it brought many revolutionary changes with framed some technological enabled applications, i.e., **Near Filed Communication (NFC)** – contactless payment service over through mobile device is facilitated that customer can transfer from their bank account and also a wallet linked to debit card without a phone connection. Further, Payment System Operators (PSO) digital service was introduced by RBI, the Additional Factor for Authentication (AFA) as part of Auto-Pay's application. The National Payment Corporation of India (NPCI), Government of India was launched different digital platforms, i.e., the Bharat Interface for Money (BHIM), the Rupay, the international payments limited (NIPL), the Unified Payment Interface (UPI) has integrated with 216 banks, the Immediate Payment Service (IMPS) has associate with 629 banks, the National Automated Clean House (NACH) is become part of 1315 credits, the Aadhaar Enable Payment System (AePS) is enable with 138 live entities, the National Financial Switch (NFS) has 112 member banks, the *99# is associate 83 banks and Bharat BillPay BBPOU's are 68 and Cheque Truncation System (CTS).

SBI Digital Initiatives

The India multinational, nationalised and public financial service statutory body is there leading adoption of ICT in banking operations. It had initiated many web-enabled, phone enabled and customer centric digital platforms. Out of that, the '**SBI Digital Village**' is taking leading position, it was execute to create a cashless ecosystem in all villages of India and it also integrated with other government digital initiatives in areas of education, health, social security, commerce & economy enhancement, agric sustainable development schemes & programmes, subsidies and benefits. Through this platform, the bank connect people by providing green Channel banking, Accounts, Cards, net/ online, wallet mobile banking, Self service pass book printing machines, cash withdraw & deposit machines, point of sale (PoS), Mobile & Micro ATM across the village localities in India. Also, the bank was initiated a social media banking application for Facebook and twitter customers called '**State Bank Mingle**' which enables customers to perform basic banking activities through bank official Facebook page. The page frequently updates information regarding ongoing activities of the banks and following customers can get alerts about important issues of the bank. Further, the bank had introduced '**State Bank Buddy**' is a mobile wallet application

platform is facilitate to send as well as ask money from anyone of your phone contacts even if they do not have account with any SBI group. This is treated as best in market-wallet with a unique blend of funds transfer, payment and other banking service. Recently, the bank had launched the **You Only Need One (YONO)** is an integrated digital banking online application initiated to users can access a wide variety of financial and other banking services, i.e., booking flight, train, bus, tax; online shopping and make bill payment for medical and other.

Then also the bank enables e2e full suite of banking services and accessing facilities for customers as well as corporate and government. It inculcate on the co-operative banks groups are needs to design and development individual or collaborative digital initiatives to restructure existing system and reduce service gaps between commercial, public and co-operative sector banks.

DigiDhan

The Ministry of Electronics and Information Technology (MeitY) was launched to promoting a less cash economy and to provide the service and facility of flawless digital mode payment to all publics of the Country in a convenient manner. It extracting, reporting, monitoring and analysis of all digital/electronic payments transactions stirring in the country and enable of infrastructure through deployment of both traditional and digital apps and applications. For same kind purpose, the '*Lucky-Grahaak Yojana and Digi-Vyapar Yojana*' was launched to enable 'CITIZENS' and 'MERCHANTS' to nudge citizens towards significantly higher usage of real time digital transaction by the DigiDhan bazaar through over 16 digital payment modes. At present, 2.05 cores citizens had registered, 2.03 cores of earning per share (EPS) activation and 26.51 lakhs merchants are enabled with this platforms.

Mobile SMS and Mail Alert Service

Short message service (SMS) banking service may use either push and full message alert or intimation or instruction regarding banking activities, i.e., deposit, dawn, transfer, balance, loan dues, EMP's, OTP, shopping, changing regulation of banks and security alert for account use and misuse. This alert service provides by all financial institutions and also academic institutions to track account on the move with instant alerts through over phone or e-mail. The customer receive alerts on their number or / and active mail ID which has registered with the bank. Bank send alert when the customer can drawn or deposit money from bank or ATM, and also these alerts is

send by Bank when the customer online or net banking account is try to login by self or somebody else. It most help to awake or aware about their financial transaction, if the consult customers do not use or involve in any kind of financial transaction and keep account safe. Also, now most of the banks are facilitated auto-generate monthly e-statement for banking transaction and e-statement frequently send to registered mail Id of the customer. If customers have any doubts about the e-statement financial transactions, then he can consult or visit to bank and get clarification. For this service, the bank will be charge or freely provide with concern of customer satisfaction. Whatever might be happen, now the SMS and Mail Alert Service are becomes most important for customer to keep their account safe and get frequently updates about their account. The co-operative banks also have been facilitated SMS / e-Mail alert service their customers/members, but all co-operative are not yet provide alert service. Hence, the central, state and district co-operative banks should seriously think on it and then made it compulsory to provide alert service to customer.

Self Check or Self Service Machine

It is another revolutionary system is going incorporating with banking activities. Today's Self-Check or Self-Service is an ultimate fusion of classic vending machine and high-tech entropy communication and complex & complex peripherals. The system is facilitated and work to fulfil the "**Five 'F's**" of customer called **1)** service on fingerprint – anytime, anywhere, anybody (AAA) can access with staff assistance, **2)** functionalities-deposit, checking cash, withdraws, official checking & cash handing, **3)** Fee elimination – some physical banking transaction might be chargeable, but self-service is not, **4)** Flexibility - easy to use, most customer interface features, save time, energy for both customer and staff and **5)** Financial – cost effective, reduce operation cost, faster service and improve the business.

Based on nature and purpose use and usage, these kiosk self-service machines are categorised as follow

- ❖ Information kiosk
- ❖ Bill payment kiosk
- ❖ Video teller kiosk
- ❖ Self-service kiosk used at banks, schools, libraries, airports and railway stations
- ❖ Way finding kiosk used at malls, airports

- ❖ Visitor management kiosk used at companies, academia
- ❖ HR kiosk
- ❖ Tracking kiosk used at railway station, bus stations, airports

The facility of mechanism customer interaction is associated with different functional activities, i.e., passbook entry & print account statement, drawn and deposit amount, check balance, apply for new passbook, request for new credit & debit card, apply for Cheque book, etc. The system allows the customer access to wide variety of services and facilities outside the scope of routine office hours without the need for any additional staff. These applications optimise resources; lower operating costs and extends banking business services stay efficient at 24×7×365 basis.

Automatic Teller Machine (ATM), mobile ATM, Micro-ATM

The concept of ATM was come existence in the mid of 1970's with the aim of withdraw amount without going bank. Later, this service has been getting advanced system, now the customer can withdraw the money, also deposit money, check balance, update phone number, Aadhaar number and other personal details and also can transfer funds to other through ATM card. The ATM service is become a common service provide by all banks with set up different places of villages, semi-urban, urban areas.

Instead of that now most of the private and also few more nationalised banks are started '**mobile ATM or ATM on wheel**' service, an ATM machine inbuilt vehicle is travel around the village or city or some selected areas of the city. These kind of service become most helpful co-operative banks customer whoever staying remote areas and whoever not able to come to bank for money or other. Banks are always monitoring these vehicles through GPS system has integrated to vehicle and also might be driver.

'**Micro-ATM**' device, even since demonetization happened, micro ATM system has become popularise. It is a customer doorstep mobile banking arrangement cum-mobile ATM platform. The device seems look like a card swiping machine which is work as handheld point of sale (PoS) particulars which can be specifically using to disburse money cash in remote areas of the country and it work remotely connect to their core banking system through this machine. This machine comes with a fingerprint scanner attached to it and also can scan Aadhaar

detail which is most required access to mobile ATM device. The IPPM Micro-ATM, Oxigen Micro-ATM IDFC Micro-ATM, BANKIT, PAY-1 AND Rupay Debit Card are some examples for 'Micro-ATM' system.

Electronic Clearing Service (ECS)

It is kind of electronic mode of payment and receipt system used for transactions that are repetitive and periodic in nature. Recently the RBI had launched the ECS service is used by institutions for transfer bulk loan funds or payments of amounts with respect distributions of divined, interest, salaries, loans, salaries and pension, etc., from one bank account to another bank account. It is done with the help of a clearing-house. This ECS system was designed and maintained by National Automated Clearing House (NACH) wing which is work as part of National Payment Corporation of India. It most helps to loan provider to debit loan EMI's deducted from the beneficiaries accounts and also cards i.e., both ECS Credit and ECS Debit cards on a fixed timeline.

Problems in use ICT applications by the banks

Behind every new initiative, there is some error and inconvenience to use or access the product, service and facility. It is difficult to design and development a complete product to all requirements. Due to following reasons, the ICT also cannot provide effective and efficient service to customers.

- ✘ **Cost of hardware & software peripheral:** these hardware equipments and software banking applications will bring more fruitful benefits for banks as well as customer. But some hardware peripheral and application software purchasing cost may be very high, small kind of banks difficult to purchase and government controlling banks may not be interest invest on it.
- ✘ **Computer or digital literacy:** banks are facing the issue with lack of computer, digital literacy among the users and professional staff of the banks.
- ✘ **Skilled professional** - banks are facing lack of experience and expertise of employee – in use, handle and maintain the technological peripheral and applications.
- ✘ **Update software packages** - Lack of updates and maintenance of software packages, because, the software developer frequently release updating models, versions and packages and incorporate new features to increase the efficiency of the packages. In this regards, technical and expertise staff required to update innovative features which had incorporated by the developers.

- ✗ **Financial support** - banks are facing of proper financial assistance provide by government or bank management and societies to bring and adopt innovative service in banks.
- ✗ **Infrastructure** - Most of the central and its branches have insufficient physical and ICT infrastructure to initiative and implement new innovative technological applications and facilities in financial institutions.
- ✗ **Training of employees and customers:** banks are not give proper training for employees to handle & implement and awareness of customers to use of ICT applications and facilities which are already used or plan to acquire and adopt by the banks.
- ✗ **Insufficient professional staff** – most of the banks, especial government or autonomous banks like public sectors and co-operative banks are suffering with insufficient manpower support to handle both traditional and digital services. It difficult handle by present available staff and it create work pressures and professional stress on working employees, no employee will properly work in professional stress.

Conclusion

ICT play the vital role in process and progress of banking and finance activities. It has become an essential to fulfil the customer satisfactions but also attain the competitive advantages. ICT helps to banker to provide diversified services to customer with the advantages of cost-effective, faster, convenient, legal and systematic manner and also it is difficult to design and development a complete product to all requirements.

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