



Journal of Internet Banking and Commerce

An open access Internet journal (<http://www.icommercecentral.com>)

Journal of Internet Banking and Commerce, December 2015, vol. 20, no. 3

Prospects and Challenges of Technological Innovation in Banking Industry of North East India

KAMALESWAR BORO

Research Scholar, School of Management Sciences, Department of Business Administration, Tezpur Central University, Tezpur-784028, Assam, India, Tel: +918135002040

Email: brokennth@gmail.com

Abstract

The objective of this paper is to study the prospects and challenges of technological innovations of banks like ATMS, credits cards, debit cards, internet banking, mobile-banking, ECS, RTGS and Mobile Wallet in North East India. The increasing internet penetration and mobile subscribers in rural as well as urban areas have created a huge opportunity for banking institutions to look beyond traditional form of brick and mortar branch banking. The North East India comprising of 8 states is an important jurisdiction for study agreeing the fact that the region has been neglected and cut from the rest of mainland India due to political, geographical, cultural and socio economic differences. This paper aims to broaden studies related to technological innovation within banking industry in the North East India. Indepth interview was conducted with 50 bank respondents regarding issues, prospects and challenges of technological innovation within banks. Views received in line with research objectives were analyzed and group together through simple frequency table and percentage. The results showed

that most customers availing technological mediums for banking purpose are young customers and ATM is the most basic form of technological medium which consumers are highly aware and using it, against comparison with other technological mediums such as credit cards, PC banking, mobile banking, internet banking, NEFT, RTGS and Mobile Wallets.

Keywords: Banking industry; North East India; ATMS; Credits cards; Debit cards; Internet banking; Mobile banking; ECS; RTGS; Mobile wallet

© Kamaleswar Boro, 2015

INTRODUCTION

Banking Industry in India has undergone a significant process of changes over time. From nationalization of large banks in 1969, and strong dominance of public ownership till 1980, a slew of change process continued to dominate the Indian banking sector. However, the rate of transformation was very slow and technology intervention was minimal. A wide range of financial sector reforms was introduced in India in the year 1991, with Liberalization, Privatizations and Globalization. Such reforms were initiated to improve resources efficiency and accelerate the growth process by removing structural deficiency affecting the performance of financial markets as well as financial institutions [1]. Till the 90's no major technological breakthrough took place in the Indian banking system and one could only make payments through two most distinguished means: cash and cheque. But after the 1990's banks in India put greater emphasis on technology and product innovation, which resulted into many new product and services deliverables. And today, a normal as well as an IT savvy customer is more empowered and left with many options of making payments, through his ATM and debit cards, credit cards, RTGS, NEFT transfer, ECS, or mobile payments. However, change in technological aspect is rapid and is evolving constantly and therefore what lies ahead in future cannot be predicted with conformity.

MOTIVATION FOR RESEARCH

The government of India is emphasizing towards removing financial un-touchability. From financial inclusion to Pradhan Mantri Jan Dan Yojna (PMJDY), effort and money has been put by the government so that poor people like marginal farmers can benefit from banks. Pradhan Mantri Jan Dan Yojna (PMJDY), being the latest scheme, promises a zero balance account and a debit card called "Rupay" with an accident insurance cover of Rs. 1 lakh [2]. The zero balance free account also entitles the holder a loan of Rs. 5000/- on maintaining steady transaction; both deposits and withdrawals for a period of six months. Launched on 28 August, 2014, by the Modi led government, the scheme was

successful to pull nearly 1.5 crores customers on the first day of its campaign. The government aimed to cover a massive audience through this scheme with an estimated cost to spend around Rs. 100 crores for its advertising campaign nationwide [3]. Delhi saw the highest number of customer account openings under this scheme. Pradhan Mantri Jan Dan Yojna (PMJDY) is different from financial inclusion planning of the earlier UPA led government, considering the fact that in the former, more emphasis has been put on household, covering both rural as well urban population of the entire country, whereas the later focused only the villages, where population stood over 2000 or more. Financial inclusion has been a challenge for India, as it could not help majority of Indian population to achieve financial literacy. In India still, 41.3 percent of households do not avail banking services [4]. Owing the need to address such a massive percentage of population Pradhan Mantri Jan Dhan Yojana was launched nationwide so that low income individuals could also bank upon and come under the purview of Indian financial system.

Technology has found a prominent place in our everyday banking. A useful form of technology innovation implemented to deliver services by banks to customers is the e-banking concept. The concept of e-banking defines all such alternate deliverable channels of banking services such as ATM, account to account transfers, electronic clearance cards, credit cards, debit cards, internet banking, telephone banking, mobile banking, miss call banking, etc. There is a major spending by banks in cash transactions. It is estimated that banks can save one third of the cost spent per transaction if done through e-banking. A major drawback in traditional face to face banking is that it is time consuming and requires more effort from employees as well as customers. E-banking delivers quick turnaround and promotes cashless transaction completed within few seconds, saving time and cost. A recent priority of the Indian government is to move from traditional paper currency based journey to a cashless transaction. Use of e-delivery channels can strengthen such initiatives and reduce illegal transaction as well as eliminate the problem of black money. Each year the government spends crores of rupees in printing notes, storage as well as transportation of currency notes. E-banking concept is seen as a strategic mechanism to reduce such major spending by the government and the banks. However, the extent of readiness to accept this medium by customers is a major concern for banking authorities. Taking into account all the rural and urban customers, technological innovation such as e-banking penetration has a long way to go before it becomes an envisioned reality. At present merely 7 percent (as in 2011) of Indian bank customers are using the internet banking, a service delivery channel of e-banking. However as per reports of IDC e-banking service delivery like mobile banking users can shoot up immediately to surpass other online banking service deliverables and boost cashless transaction. With more number of mobile subscribers growing in household, mobile banking can be at the forefront to avail technological innovations like e-banking services.

The North East Region of India is one of the most strategic regions for trade and commerce considering the fact that 98 percent of India is connected with international border through the north east region. The Northeast India covers 9 percent of India’s geographical area with its borders surrounded by neighboring countries including China, Nepal, Bhutan, Myanmar, and Bangladesh. The region is home to about 3 percent of India’s total population. Despite potential natural resources for development and prospects for forming a strategic business hub for International cross border trade, the region remains as the most economically laggard regions of India. Against this onset, it is strategically very important to know how technology innovation is affecting across Industries of the region. As banking industry is one of the standing pillars for development of trade and commerce, this study draws motivation in order to measure the impact of technological innovation of banking industry within the North East Region (Figure 1).



Figure 1: Maps of india [11]

LITERATURE REVIEW

According to a report, “Trends and Progress of banking in India,” published by RBI [5] technology based service banking has failed due to a number of reasons such as socio-economic, technological, legal, infrastructural and psychological factors [6].

Gupta [6] further states that the slow pace of popularity in usage of technology based banking services in India are due to factors such as lack of early mass adaptors of technology based banking services, slowness in adoption of internet by 40+ age group and lack of security and trust in technology based banking service deliverables.

According to Kamesam [7] even though banks are heavily investing on designing

new delivery channels, there are other factors that require prior attention. Such factors according to him include: understanding customers underlying attitude, their current channel or transaction behavior and using highly sophisticated experimental or scientific customer research in order to design tactics to change customer's behavior through economic impacts.

Agwu [8] opines that mobile phones are the most convenient mode to provide mass marketing of banking services as these devices have higher rate of acceptance and penetration even among less educated sections of people. In fact there are predictions that banking services through mobile devices could suitably replace brick and mortar branch banking in future.

Akturan and Tezcan [9] share similar views and opine that many customers today are looking for time and cost saving alternate delivery channels of banking services and are tired of old banking habits. Physical branch network banking involves waiting in long queues and requires moving from one counter to another to get even basic tasks accomplished, which is hectic, time consuming and cause unwanted delays [10]. Therefore, the demand for convenience banking of financial services is gaining more prominent among today's generation customers.

According to Horseman technology implementations in banks have helped them to achieve three major objectives such as:

1. To reduce operating cost
2. To generate revenue and
3. To protect and increase market share.

Kamesum [7] reports that typically it cost Rs. 50/- per transaction when conducted through brick and mortar branch banking, whereas it cost only Rs. 15 if done through technology based service like ATM. Internet based banking are more cost effective and cost around only Rs. 4 per transaction, which is even lower than ATM devices [7].

Thus it is seen that technological interventions among banks have delivered a host of benefits that can be consumed by customers of any geographical space. Against this onset it has become very important to know what are the prospects or challenges that the banking industry holds in the North East Region of India.

OBJECTIVE OF STUDY

- To identify issues and challenges related to using technological innovations in operations among banks.
- To identify customer's most common complaints while using technological innovations as a service delivery.
- To know trends and prospects of technological innovations used in banks in

North East India (Table 1a and 1b).

Table 1: Profile of North East India

Administrative Divisions	8 States (Assam, Meghalaya, Manipur, Arunachal Pradesh, Sikkim, Mizoram, and Tripura.	Administrative Divisions
Total Population	45,590,871	Total Population
Total Area	2,55,168 Sq. Km.	Total Area

State	Population	Population density per sq. km.	Decadal growth rate	Literacy	Sex ratio	Official languages
Assam	31,205,576	398	16.93%	72.19%	958	Assamese, Bengali (in the Barak Valley), Bodo
Tripura	3,673,917	350	14.75%	87.22%	960	Bengali, Kokborok
Manipur	2,570,390	115	18.65%	79.21%	992	Meiteilon
Nagaland	1,978,502	119	-0.47%	79.55%	931	Nagamese, English
Mizoram	1,097,206	52	22.78%	91.33%	976	Mizo, English
Sikkim	610,577	86	12.40%	81.42%	890	Hindi and Nepali, Bhutia

Meghalaya	2,966,889	132	27.82%	74.43%	989	Khasi, Pnar, Garo, Hindi, English
Arunachal Pradesh	1,383,727	17	25.92%	65.38%	938	Hindi, Deori, Assamese, English, local

Table 2: Banking Status of North East India

Banking Development Indicators in NES (North Eastern States)					
State	Population per branch	C-D Ratio		Average Growth	
	(As on June 2010)	(Per Cent)		(2000-01 to 2009-10)	
		End-March 2001	End-March 2010	Credit	Deposits
Assam	21,000	32.8	36.1	21.7	19.7
Arunachal Pradesh	15,000	12.7	25.3	34.5	24.4
Manipur	34,000	38.9	40.7	23.1	20.7
Meghalaya	13,000	23.5	47.3	31.5	22.6
Mizoram	10,000	16	24.4	27.2	19.1
Nagaland	25,000	13.8	29.9	27.7	19.4
Tripura	16,000	20	25.3	21.1	20
NES ((North Eastern	20,000	27.8	33.5	22.5	19.8

States)					
All India	14,000	59.2	73.2	21.9	18.9

The North East Region (NER) is well endowed with natural resources, like timber, bamboo, tea, oil and gas, agro-horticultural resources, mineral deposits, immense hydroelectric potential and significant forest resources. However, despite the abundance of such resources, the region is lagging behind in comparison to many Indian States in terms of vital development indicators like economy, trade and commerce, Gross Domestic Products, National Per Capita Income, technological knowhow and research and development units. The region occupies 8 percent of India’s land area, inhabited with around 3.77 percent of India’s total population and accounts a little over 2.5 percent of India’s GDP. Economy of the region is largely agrarian in nature with over 70 percent of the population engaged in agriculture for livelihood, service sector comes next and the manufacturing sector is still at a nascent stage. Partition in 1947 played a detrimental role in transforming the economic landscape of the region, which was till 1947 at the forefront of development. The immediate impact of partition on the North East was that it was cut off from rest of the country. With East Bengal becoming part of Pakistan, the traditional trade and communication routes with the North East were almost immediately snapped, and with the earlier frontier routes with Myanmar and China having died down, the region became landlocked in the true sense of the term. The lack of economic opportunity and myriad other reasons gave rise to insurgencies which in turn played a role in exacerbating the economic situation thus creating a vicious cycle that fed on the region’s isolation. The Government of India has been making concerted efforts for economic development of the North East. The first north east Investment Promotion policy announced in 1997 provided a number of incentives for industrial investments in the region. Following the limited success of the NEIP a much more comprehensive North East Industrial and Investment Promotion Policy (NEIIPP) which provides a host of incentives at unprecedented levels, for investment in the region was announced in 2007.

BANKING STATUS OF NORTH EAST INDIA

Financial exclusion remains a major challenge for India. Nearly, 40 percent of the population is still outside the fold of formal banking in the country [11]. It is also noteworthy that there exists a wide disparity in rural and urban population as well as within different geographic regions. The formal financial system in India is dominated by banks. North East India, however, lag behind other parts of Indian states in terms of development in banking sector. This is evident from the low banking penetration, with higher average population per bank branch, in the North Eastern States as compared with the all-India average, though there were significant variations across states in the region with Mizoram and Meghalaya having much better ratios. The credit-deposit (C-D) ratio in North Eastern States

is much lower at 34 per cent at the end of March 2010 than that of 73 per cent at the all-India level. Even as credit expanded at a faster pace than deposits in the last decade, the gap remained very wide (Table 2).

RESEARCH METHODOLOGY

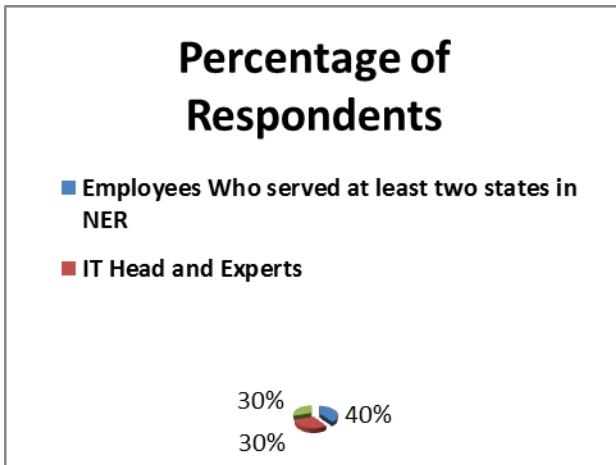
The research is qualitative in nature. For primary data collection process, interview schedule was administered in order to obtain views regarding technological innovations used and implemented by banks. Snowball Sampling and Quota sampling was used in order to identify respondents and fill the quotas having adequate knowledge regarding technological innovations used and implemented in banks, Customer Relationship officers and employees who have at least served two Northeastern states for a period of one year during their tenure of service were considered. Various public and private banks in Assam were considered for the study. Regional heads, branch managers and IT officers, public relation officers were included in the interview schedule to know the insights of trends and complaints made by customers. The following banks branches in Tezpur were surveyed: Indusind, State Bank of India, Punjab National bank, Central Bank of India, Canara Bank, Indian Overseas Bank, Bank of Baroda, UCO Bank, Allahabad Bank, HDFC Bank, ICICI bank, and Syndicate bank. And the following bank branches, including regional office were surveyed: Axis Bank, Federal Bank, UCO Bank (Zonal office), Canara Bank, HDFC Bank, Union Bank of India, Indian Bank (Regional Office), Punjab and Sind Bank, Central Bank of India (Regional Office), Punjab National Bank (Regional office), Indusind Bank (Regional office), and United Bank of India (Regional office).

Secondary sources of data were also used including digital and print mediums such as journals, books, articles, newspapers, websites, whitepapers, university thesis, seminar proceedings, etc. The following quota was used to fill the respondent shown in Table 3.

Table 3: Quota was used to fill the respondent

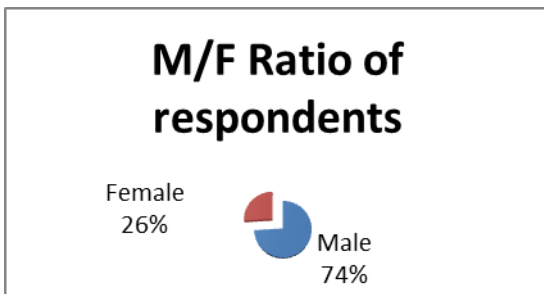
Employees from IT Division or e-banking supervisors	15
Customer Relationship Officer	15
Bank Employees who worked in at least two states of Northeast India	20

Open ended questions were administered verbally (orally) regarding banking issues, customer's complaints, benefits of the region followed by a detailed discussion. Views and opinions from the respondents were noted down based on relevancy and adequacy of information in order to fulfill the objectives of the research. The main purpose was to know issues related to IT innovation in banking sector in North East India from banks perspective. Why consumers are not availing IT enabled banking services irrespective of their benefits, what are some major complaints raised by customers to bank officials, why brick and mortar banking are still popular in North East India, what issues banks face while delivering IT enabled services to customers, Which technology based systems customers are using the most were some questions which were asked to respondents by the researcher. The aim of the paper was to get insight of prospects and challenges of IT innovations from banker's perspective and hence qualitative method was adopted. Banks employees serving the North East India, IT heads and experts as well as Customer Relationship Officers could best provide the information regarding IT advancement in banks as well as issues faced while delivering these services among customers (Figures 2 and 3).



Demographic characteristics of respondents

Figure 2: Respondents Representation of the Quota



No of male respondents=37

No of female respondents=13

Figure 3: Male/Female ratio of respondents

Data analysis

According to Glesne [12] and Berg [13] information collected through qualitative research technique can be collated and analyzed by means of an open coding [8]. They both contributed towards how information can be gleaned in a qualitative research. Although each of them followed a slightly different approach, but overall their suggestions delivers a comprehensive method for collecting, collating and analyzing the gathered data for this study. Considering Glesne's [12] and Saunders [14] suggestions, different procedures for collating data were followed in this study, including categorization of information in order to meet the research objectives. This way the researcher was able to compare and contrast the different opinions of respondent's data with various aspects of the study. However, all data collected through interview process for this study could not be themed as some information or opinions received from respondents did not bear any direct or indirect relationship with the research objectives.

Findings

Major Views Obtained through the interview process (Figure 4) and Frequency of Respondents is shown in Table 4.

Customers are mostly aware of e-banking.
Higher level of income and transaction.
Customers are also doing mobile transactions.
Mobile banking is growing more prominent among customers.
Customers have low level of income.
People are not tech savvy.
Computer literacy is important for e-banking.
Word of mouth motivate customer to use e-banking such as ATM, s and internet banking.

There is a shortage of Human Resource in banking industry.
People are lacking technical knowhow.
Some problems associated with teller machines arise from customers. Problems are due to link failures.
Security is one of the major issues for not using e-banking services.
Customers still prefer face to face banking.
1 out of 100 may be using e-banking services.
Customers even fear to use ATM cards.

As cashless transaction, cheque and account to account transfer are seen to be more prominent.

Problem in cash remittance. As number of banks are growing cash remittance from banks is increasing, thus there are left huge cash in chest, where no interest can be earned.

Security and fraud issues are main problems.

Some customers are not using ATM due to fear

Low level of education among consumers-Semi urban banking, so less usage of technological mediums

People are readily accepting e-banking.

Customers are mainly middle and high income levels.

Customers have low income.

Customer fear to use e-banking.

Urged the need of technology and skilled employees to promote e-banking.

Fraud Issues have become common

There is a negative word of mouth spread against e-banking services.

Security, hacking, phishing have become common.

Among alternate service deliverables ATM users is highest, second is internet banking and third is mobile banking.

In e-banking education and awareness is the main issue.

E-banking can save 1/3 of transaction cost of cash transaction.

Connectivity issue is a main problem for using e-banking.

Customers are mostly illiterate

Students are using e-banking services

Fraud call from bank misguide customers from using e-banking services

E-banking reduces cost of transaction

Customers have high education levels and have annual income of at least Rs. 50,000/-.

Most employees are trained and have qualified degrees to use any kind of new technology intervention.

Customers are also comfortable using e-banking services.

Mobile banking is gaining more prominence apart from ATM services and Net banking. Customers have no issues with e-banking.

Risk factor is the main issue in e-banking.

The need of the hour is to provide secure banking.

Employee readiness of technology acceptance is OK.

Phishing mails are often disturbing for e-banking customers.

Uncounted money flowing in rural population has come out.

Notes are not tallied; there is no proper mechanism of balancing cash outflow and inflows. Eg. Liquidity or cash flows in tea

gardens of Assam.
Banks are merging into a common platform.
Link Connectivity slack time is a concern.
Green channel banking is growing.
Among e-banking services used by customers; miss call banking is highest, followed by internet banking and SMS banking. Security is a major issue. Lack of awareness is another obstacle and 90 percent of customers are not educated.

Figure 4: Remarks

Discussion

Possible opportunities

Nearly all states of Northeast region have a high literacy rate, which can positively impact the technology based banking industry as many previous researches [15-18] have established a positive correlation between level of education and technology based banking adoption.

A number of researchers [19-21] have found that gender is a significant factor in determining technology usage. Male customers are found to be more risk friendly than female customers in terms of new technology based usage. In Northeast India women folks are more empowered in comparison to the rest of the country. Therefore, women could be encouraged to adopt technology based banking deliverables in the region.

The North East region is endowed with rich natural resources and surrounded by international boundaries. If well developed using appropriate techniques, technology and marketing support, it can become economic hub for business activities, or other allied fields like microfinance operations, tourism, food processing, bamboo industries etc. which can also provide better and diverse avenues' for technology based banking deliverables.

Due to lack of infrastructural facilities, huge gap of demand and supply of banking facilities exist and hence it can be said that there are ample scope for banking institutions or other new MFIs to expand their operation. Technology based deliverables can broaden these definitions.

Table 4: Frequency of Respondents

Opinion	Frequency of respondents	Total Respondents	Percent
ATM is a major service delivery channel which is extensively used by bank customers in North East India	50	50	100.00%
Young customers are aware of technological innovations and more prone towards using new technological mediums of banks	47	50	94.00%
Customer awareness regarding technological innovation is less in North East India	42	50	84.00%
Security and fraud issues is a major concern for customers for not using technological mediums such as e-banking services	28	50	56.00%
Customers are aware of technological innovations in banking such as e-banking	28	50	56.00%
Customers are using mobile banking in North east India	22	50	44.00%
Customers are not tech savvy in	20	50	40.00%

North East India			
Customers do not have basic skills for using technological innovations in NER	17	50	34.00%
North east India is a agro based economy, trading is limited, and therefore technological innovation in banks have less avenues	10	50	20.00%

Challenges

Due to its typical geographical characteristics, hilly terrain, in North east region of India, it becomes difficult for financial institutions like banks to operate in the region. The North East region is also a sensitive zone for natural disasters such as landslides and floods, which further deteriorates the risk of operation of banking and financial institutions.

Poor infrastructure, low connectivity, underdeveloped transportation and communication, unpredictable power situations and poor credit-deposit ratio is what makes the region vulnerable for growth and development in terms of financial, technological and industrial development. The decline in agriculture growth and stagnant industrial and service sector has led to limited livelihood options. This poses a challenge to link micro-credit activities to livelihood generation.

The region has low population density with some states such as Arunachal as low as 13 persons/sq km. Coupled with poor infrastructure; this dispersion of people increases the cost of operations for MFIs, which ultimately results in high costs for the clients.

The area is marked by the presence of a large tribal population. The presence of multi-ethnicity, multiple languages and heterogeneous cultures act as a constraint. The cost of aggregating people in the Northeast is much higher. Although the region has a strong pool of natural resources, a mismatch between resources, control over resources and scientific management of the same are hindering growth and development of the region.

CONCLUSION

The study is able to discover some meaningful insights pertaining to the scenario of technological innovations in the banking industry of North East India. According to IT experts contacted in the course of interview, most banks are using Finacle software in order to maximize efficiency in operations. Finacle is a software package that is widely used by many banks in India. Developed by Infosys, Finacle has wide applications and supports much operational functionality like e-banking, core-banking, CRM payments, wealth management, and liquidity management and delivers round the clock solutions significantly improving customer's experience. Major customer complaints from customers are regarding ATM machines link failures. As per respondent's views expressed, basic computer knowledge or mobile phone usage with advance features are seen as strong determinant factors that motivate using technology innovations in banks by customers. Despite high literacy ratio in North east states like Mizoram, Assam, and Meghalaya, since most population are confined in rural areas and due to agro based economy, technological innovations have less avenues for usage in the region. However in few urban capital cities such as Guwahati, Shillong, Aizwal, and Sikkim presence of POS machines in malls and other retailers for making payments through ATM cards, number of technological innovation usage is seen on a rise. In order to counter security concerns (like phishing, frauds) of customers using other technological delivery channels such as internet and mobile banking, banks have designed One Time Passwords (OTP) mechanism for all users. Due to limited trading in North east region, IT innovations have so far not been highly penetrated. Lack of awareness as well as major benefits of technological innovations like e-banking remain unknown to major rural population of North East India, which is why it has not been so popular among people of the region.

SCOPE AND LIMITATION OF THE STUDY

The research is limited to very small sample size for data collection process. It was carried out in Assam only. Two cities namely Tezpur and Guwahati were considered for study; in order to draw meaningful insights of prospects and challenges of technological innovation in North East India. These cities were chosen for researcher convenience and presence of adequate number of banks including private and public sector. Considering the presence of 8 states in North East India, sample size could be increased to represent the entire population better. But due to time constraints and lack of resources other states could not be considered for study. So, the sample under study is comparatively small and may not rightfully represent the overall views of the entire North East India as the scenario may be different from Assam in other states of North East India. However, considering the rapid pace of urbanization and industrialization, Assam is much ahead of other North Eastern states. Hence, Assam presents itself as a

wise choice for being considered for this study. In future, other states could also be considered for study in order to gain comprehensive and broader understanding of prospects as well as challenges faced by banks towards implementing technological innovations.

REFERENCES

1. Sahoo S (2013) Financial Structure and Economic Development in India: an Empirical Evolution. RBI.
2. (2015) Official Website for PradhanMantri Jan DhanYojna, Department of Financial Services. India.
3. (2014) PradhanMantri Jan DhanYojana (PMJDY), Department of Financial Services. India.
4. (2011) 7-fold rise in Net banking in India since 2007. Banking Service.
5. Mohanty D (2011) Economic and Financial Developments in the North-Eastern States. RBI.
6. Gupta D, Gupta P (2007) Mother Tongue Friendly e-Delivery Banking Channels in India - Ultimate Solution for its Popular Usage. Social Science Research Network.
7. Kamesam V (2004) Retail Banking: Challenges Ahead in Distribution Channels in Urban/Rural India. Reserve Bank of India Bulletin.
8. Agwu E (2012) A Qualitative Study of the Problems and Prospects of Online Banking in Developing Economies-Case of Nigeria. Journal of Internet Banking and Commerce 17: 8-9.
9. Akturan U, Tezcan N (2012) Mobile Banking Adoption of the Youth Market: Perceptions and Intentions. Marketing Intelligence and Planning 30: 4-9.
10. Agwu E (2014) Adoption Triggers and Barriers of Mobile Banking Services in Nigeria. International Review of Social Sciences 2: 374-386.
11. (2009) State of the Sector Report. Microfinance India.
12. Glesne C (2006) Becoming a qualitative researcher: An introduction. (3rd edn), Longman, New York.
13. Berg BL (2007) Qualitative research methods for social sciences. (6th edn), Long Beach, Pearson Education.

14. Saunders M, Lewis P, Thornhill A (2009) *Research Methods for Business Students*. (5th edn), Harlow: Prentice Hall.
15. Jung JY, Qiu JL, Kim YC (2001) Internet Connectedness and Inequality: Beyond the Divide. *Communication Research* 28: 507-525.
16. Lenhart A (2002) *Barriers to Internet Access: From the Non-user and New User Perspective*. Paper presented at the Association of Internet Researchers Conference, Maastricht, Netherlands.
17. Katariina M (2006) Clustering the consumers on the basis of their perceptions of the Internet banking services. *Internet Research* 16: 304-322.
18. Chi YS, Kevin G, David E (2007) Factors affecting the adoption of Internet Banking in Hong Kong: implications for the banking sector. *International Journal of Information Management* 27: 336-351.
19. Joshua AJ, Moli KP (2011) Usage Patterns of Electronic Banking Services by Urban Educated Customers: Glimpses from India. *Journal of Internet Banking and Commerce*.
20. Sohail M, Shanmugham B (2012) E-banking and customer preferences in Malaysia: An empirical investigation. *Information Sciences* 150: 207-217.
21. Chen W, Wellman B (2004) The Global Digital Divide within and between countries. *IT and Society* 1: 39-45.