Issues and Challenges in moving towards a Digital and Cashless Banking Economy

A Project Report submitted to *Indian Institute of Banking and Finance* (IIBF) pursuant to the award of Macro Research Project Grants for the year 2018-19

Submitted by
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LETTER OF AUTHORISATION (1 of 2)

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07th June, 2019

Dr. Karabi Goswami,
Assistant Professor,
Assam Institute of Management,
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Madam,

Sub: Macro Research 2018-19.

We are pleased to inform you that the Institute has approved your Macro Research Proposal on **"Issues and challenges in moving towards a digital and Cashless Banking Economy"**, based on the presentation made by you on **04th June, 2019** subject to the following terms and conditions:

- The theme of your research will be '**Issues and challenges in moving towards a digital and Cashless Banking Economy**'.
- You are required to incorporate all the suggestions discussed with you during the presentation.
- The research report should be around **150 to 200 pages** and the final report will have to be submitted within **six** months from the date of this letter.
- The questionnaire should be approved by IIBF before being utilized for data collection.
- You are eligible for a cash award of Rs.2,50,000/- (less TDS) upon acceptance of the final report by the Institute.
- A part of this award (25% of the sum) will be given as an advance to you on the commencement of the project and the remaining will be disbursed upon acceptance of the final report by the Institute.
- You will have to submit a mid-term progress report before **30th August 2019**. The Research Advisory Committee of the Institute will evaluate the mid-term report. In case it is found that the study has not been conducted to the satisfaction of the Institute, the assignment will be terminated and the advance paid will be adjusted towards the efforts taken but the remaining balance will be forfeited. In case you decide to withdraw midway/before completion of the work, for any reason whatsoever, you will be required to pay back the advance with interest thereon @12% p.a.

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INDIAN INSTITUTE OF BANKING & FINANCE

CONTINUATION SHEET...

- Along with your acceptance of the assignment, a copy right transfer form will have to be signed by you conferring exclusive rights of your work in favour of Indian Institute of Banking & Finance.

- You will sign an undertaking that the report submitted by you is original and not published elsewhere.

If you agree to the above terms and conditions, you may sign and return the duplicate of this letter in token of your acceptance and commence work on the project forthwith.

Thanking you,

Yours sincerely,

(Dr. S. Muralidaran)
Director – Academics

DECLARATION

We hereby declare that the Project Report entitled 'Issues and Challenges in moving towards a Digital and Cashless Banking Economy' submitted to the Indian Institute of Banking and Finance (IIBF) pursuant to the award of Macro Research Project Grants for the year 2018-19 is our original work and has not been submitted earlier to any Institution, Funding Organisation or any University.

We also declare that no chapter of this Project Report in whole or in part is collected and incorporated in this report from any earlier work done by others or by us.

(Karabi Goswami)

(Shazeed Ahmed)

Place: Guwahati
Dated: 30th December, 2019

ACKNOWLEDGEMENT

The completion of this Project Work would not have been possible without the contributions of a number of individuals whom we are grateful to.

We are indebted to Dr. S. Muralidaran, Director-Academics, Indian Institute of Banking and Finance who has approved and given us the opportunity to undertake this Project Work

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We also express my gratitude to all other stakeholders who provided us different types of helps at different points of time in one way or the other during the Project Work.

Lastly we also extend my special thanks to other family members for their overall moral support during our Project Work.

(KarabiGoswami)

(Shazeed Ahmed)

Place: Guwahati
Dated: 30th December, 2019

Abstract

The Indian Economy post liberalization has witnessed numerous developments and policy changes in multiple fronts. Among the many significant areas, mention can be made of the banking sector which is regarded as the lifeblood of the economy. The sector has continuously seen transitional changes, one after the other with each successive Government. This has led to a robust and financially strong economy. In the banking sector, one such notable area is the country's move towards a digitalized and cashless economy. The process towards a digitalized economy has gone a long way. But there is much to achieve in terms of meeting the challenges of totality in its approach. Inclusive growth both in the rural as well in the urban areas of the country is the call of the hour. To facilitate the achievement of such objectives, this research work entitled, 'Issues and Challenges in moving towards a Digital and Cashless Banking Economy' has been undertaken.

The study tried to generate ideas, information and factual figures on various fronts. They include assessing the current perception of common mass towards digitalization and cashless transactions, identification of key persons in families who conducts digital transactions, knowing the impending barriers in inculcating a culture of digital cum cashless banking and assessing the present status of penetration of digital transaction in the daily life of the urban and rural masses. The study also explored the scope of social marketing in creating a positive environment towards digital and cashless banking. It further tried to investigate the scope of using SHG's for promoting cashless banking to the illiterates in the rural areas and building mechanism in furthering the identified cause.

The study was conducted in the state of Assam by covering ten major districts selected by means of field survey. A total of two thousand samples were collected by means of proportionate sampling method based upon the population size of the districts. Further from each district rural and urban population were selected based upon rural urban proportions of the population in each district. The study generated a gamut of interesting facts and figures in fulfillment of the envisaged objectives. These are vital inputs for policy makers in framing important policies related to reformation and regulation in the banking sector in the process towards a digital and cashless banking economy. At the same time researchers and academicians can review the findings of the study for further advancement in their related fields. It is surmised that the work would also go a long way for the benefit of all other related stakeholders at large.

EXECUTIVE SUMMARY

Sl no	HEADING	DETAILS
1	**Research Project Title**	Issues and Challenges in moving towards a Digital and Cashless Banking Economy
2	**Nature of Project Authorised**	Macro Research Project Grants for the year 2018-19
3	**Name of the Researchers**	Dr. Karabi Goswami & Dr. Shazeed Ahmed
4	**Institution of Affiliation**	ASSAM INSTITUTE OF MANAGEMENT (A Government of Assam Society), Bigyan Path, West Boragaon, Guwahati, Assam
5	**Need of the Study**	It is felt that digitalised economy is a boon for the country. But there is a long way to go. The study would help to delve deeper into to identify issues and challenges to ensure a totally digitalised and cashless banking economy.
6	**Objectives of the Study**	(i) To study the current perception of common mass towards digitalization and cashless transactions. (ii) To identifying key persons in a family who conducts digital transactions. (iii) To identifying the impending barriers in inculcating a culture of digital and cashless banking. (iv) To know the present status with respect to penetration of digital transaction in the daily life of the urban/rural masses. (v) To explore the scope of social marketing in creating a positive environment towards digital and cashless banking (based upon the findings from objective 1 - objective 4). (vi) To explore the scope of using SHG's for promoting cashless banking to the illiterates in the rural areas and building mechanism for the same.
7	**Research Questions**	(i) Does Social Marketing does not have any role in creating a positive environment towards digital and cashless banking economy? (ii) Does SHG's have any role in promoting and building the mechanism towards a digital and cashless banking economy?

8	**Research Methodology**	Research Design: Exploratory cum Descriptive research Sample Size: 2000 units (1616 rural and 384 urban) Sample unit: Individual household Sampling Technique: Proportionate Sampling Pilot Survey: 30 respondents were taken Reliability of Scales by: Cronbach's Alpha
9	**Questionnaire**	Questionnaire consist of questions to know demographic information, use of attitudinal statements to know perception towards demonetization and barriers towards digitalization (uses three point rating scale), identification of key persons in a family who conducts digital transactions (uses multiple choice options) and knowing the status of use of digital facilities / products / services (using options like aware and using, aware but not using, not aware)
10	**Geographical Area**	Confined within the state of Assam (covering 10 districts namely Kamrup, Bongaigaon, Goalpara, Barpeta, Kokrajhar, Nalbari, Tinsukia, Jorhat, Nowgaon and Sonitpur.
11	**Time Period**	The study was for 6 months from July to December, 2019
12	**Analysis Techniques (& Inferential Statistics)**	ANOVA, t-test, Chi Square Test, Counts, Percentages, Mean
13	**Pictorial Representations of data**	Bar Diagram, Pie Charts and Models
14	**Finding / Conclusion / Recommendations**	-As below-

MAJOR FINDINGS

OBJ # 1: PERCEPTION OF COMMON MASS TOWARDS DIGITALIZATION

1. Respondents are most agreeable to the statement that digital and cashless economy will help reduce the risk of holding cash followed by the statement that it is very convenient as it is anytime anywhere banking.
2. Respondents are least agreeable to the statement that banks should discourage branch visits to encourage digital transactions.
3. There is a significant difference in the perception that digital banking is meant for tech savvy people and that digital and cashless economy will be very convenient for all as it is anytime anywhere banking with respect to respondents from urban and rural areas.

4. Respondents in the rural areas are more agreeable to the statement that digital banking is meant for tech savvy people.
5. Respondents in the urban areas are more agreeable to the statement that digital and cashless economy is very convenient for all as it is anytime anywhere banking.
6. Respondents in the age group of 18-25 are more open to the concept of digitalization and cashless banking than respondents in the senior age groups viz. 45 and above.
7. Respondents with relatively higher education level are more positive towards embracing digitalization and cashless banking than respondents with lesser education.
8. Discounts and offers help attract people in the lesser income levels towards digitalization and cashless banking more than people in the higher income levels.
9. Public sector /Government employees feel that digitalization is meant for tech savvy people, they also feel that it is very convenient and helps avail various offers and discounts.
10. Self employed people do not feel that it is convenient or very safe way of transacting. They also do not feel that digitalization will lead to overall progress and development of the country.

OBJ # 2: KEY PERSONS IN A FAMILY WHO DOES DIGITAL TRANSACTIONS

11. Majority of the respondents opine that their children are the ones in the family who are the most Phone/ Tech savvy.
12. Wives are found to be the least Phone/ Tech savvy in the family.
13. It is also interesting to observe that 10 percent of the respondents have opined that nobody in the family is Phone/Tech savvy.
14. Majority of the respondents in the rural areas have said that children are the most Phone/Tech savvy person in the family whereas majority of the respondents in the urban areas have said that husbands are the most tech savvy person in the family.
15. Respondents also opine that it is mostly the children in the family who conduct digital transactions or make online purchases.
16. Also respondents from both rural areas as well as the urban areas have said that children are the ones who mostly conduct digital transactions or makes online purchases
17. Wives are again identified as the ones who normally do not conduct digital transactions or make online purchases.
18. It is also seen that 11.7 percent of the respondents have said that no one in the family conducts digital transactions or makes online purchases.

OBJ # 3: BARRIERS IN DIGITAL AND CASHLESS BANKING

19. Respondents perceive electricity and internet connectivity issues as barriers to digitalization and cashless transactions.
20. Also they perceive that people are not aware of all the digital products which are available and its usage
21. Also it is observed that respondents do not perceive digital transactions to be very complicated and full of hassles. Hence from the study perspective this is not an impending barrier to digitalization and cashless transactions.
22. Respondents in the rural areas are more agreeable to the statements that that digital transactions are very complicated and full of hassles, in digital transactions, there is perceived risk of fraud, a culture of digital and cashless banking is missing, people are

not aware of all the digital products which are available and its usage, there is a risk of committing errors and losing money, the processes involved in conducting digital transactions are not easy to understand , it is a technical subject and beyond the comprehension of common masses and that electricity and internet connectivity issues are involved

OBJECTIVE 4: STATUS OF PENETRATION OF DIGITAL TRANSACTION

PENETRATION OF DIGITAL FACILITIES / PRODUCTS

JAN DHAN ACCOUNT: Jan Dhan Account has low penetration with 28.20 percent on an overall basis with 25.60 percent in rural areas and 26.60 percent in the urban areas. This indicates that there is massive scope for opening Jan Dhan Account. But a major segment of the population considers Jan Dhan Accounts as poor man's bank account.

SAVINGS BANK ACCOUNT: Savings Bank Account is popular and has high penetration with 90.50 percent on an overall basis with 90.80 percent in the rural areas and 89.60 percent in urban areas. Opening of such account enables safe cum secured banking transactions and enables to availing various bank benefits.

ADHAAR CARD: Adhaar Card issuance is not cent percent complete and has more than average penetration with 76 percent on an overall basis with 73.60 percent in rural areas and 85.90 percent in urban areas. Adhaar Card till now is not compulsory in the north eastern part of the country due to the ongoing NRC (National Register of Citizens) Exercise.

MOBILE PHONES: Mobile phones are very popular and have high penetration with 94.40 percent on an overall basis with 93.90 percent in the rural areas and 96.40 percent in the urban areas. Among the population possessing mobile phones, 83.90 percent are Android Phone owners (with 84.60 percent in rural areas and 82.50 percent in urban areas). Features phones are slowly phasing out.

PENETRATION OF VARIOUS MODES OF BANKING SERVICES

VISITING BANK PERSONALLY: The most popular mode as revealed by the field work is by visit to the bank personally. Availing banking service by personally visiting the bank is 84.40 percent (on an overall basis) out of which 82.1 percent is in rural areas and 94.10 percent is in urban areas. Culturally the people are still emotionally attached with availing banking services by visit to the bank personally as customers get personalized services.

SERVICES OF BANKING CORRESPONDENT / AGENTS: The percentage of people availing the services of banking correspondent / agents is 29.80 percent (on an overall basis) out of which 28.50 percent is in rural areas and 35.40 percent is in urban areas. It is an extension of normal banking service to maintain individual USP's. Further it is convenient for people who are engaged in multiple activities and have no spare time.

ONLINE MODE THROUGH MOBILE PHONE / COMPUTERS: The percentage of people availing online mode of banking services is 55.20 percent (on an overall basis) out of which

52.90 percent is in rural areas and 64.80 percent is in urban areas. The percentage in the urban areas is more than rural areas. This is a reflection that urban people are more techno savvy and comfortable with banking services through online mode. It also saves time, cost and is convenient for them.

CHECKLIST OF PENETRATION OF DIFFERENT DIGITAL TRANSACTIONS

TYPE OF TRANSACTIONS	*OVERALL*	*RURAL*	*URBAN*
Online Payment of Mobile Phone Bill	MEDIUM	MEDIUM	MEDIUM
Online Payment of Electricity Bill	LOW	LOW	MEDIUM
Online Payment of Property Tax Bill	LOW	LOW	LOW
Booking of LPG Gas online / sms mode	MEDIUM	MEDIUM	MEDIUM
Online Payment for LPG Gas refilling	LOW	LOW	LOW
Online Net Banking/Mobile Banking	MEDIUM	MEDIUM	HIGH
Cashless (Debit Card /Card/Paytm) Payment	MEDIUM	MEDIUM	HIGH
Buying goods / services online	HIGH	MEDIUM	HIGH
Transactions through Cash on Delivery mode	HIGH	MEDIUM	HIGH

Benchmarking of High-Medium –Low Penetration given as per Table 10.1 in Appendix

ACTION FOR INCREASING PENETRATION BASED ON ABOVE FINDINGS

	TYPE OF TRANSACTIONS	**ACTION REQUIRED / TOOLS**
1	Online Payment of Mobile Phone Bill	Create more awareness, holding Workshops and Consumer Awareness Program by mobile phone companies as part of CSR activities, increase the cash back offers to motivate, engagement of SHG's in the rural areas for capacity building, holding live demonstrations in social and cultural platforms
2	Online Payment of Electricity Bill	Create more awareness through consumer awareness programs by the Electricity company as part of CSR activities, technical issues related to bill payment non updation needs to be sorted out
3	Online Payment of Property Tax Bill	Create more awareness through consumer awareness programs by the respective local Municipality Corporation as part of CSR activities, engagement of SHG's in rural areas
4	Booking of LPG Gas online / sms mode	Create more awareness, rural as thrust area, instructing distributors to promote online booking, face to face advice, attaching condition that subsidy will be credited to bank account provided online payment is made
5	Online Payment for	Issue instruction to the LPG Distributor to promote online

	LPG Gas refilling	payment for refilling, formulating schemes for the rehabilitation of the delivery man, attaching condition that subsidy will be credited to bank account provided online payment is made
6	Online Net Banking/ Mobile Banking	Need for organizing customer awareness programs by banks on online banking, educating customers on the do's and do not's of net banking / mobile banking to boost confidence on its use, making helpline numbers very receptive, engagement of SHG's in the rural areas for capacity building, targeting students of educational institutions to promote at respective homes
7	Cashless (Debit Card /Card/Paytm) Payment	Confidence building measures, educating on the do's and do not's of net banking / mobile banking, engagement of SHG's in the rural areas for capacity building
8	Buying goods / Services Online	Engagement of SHG's in the rural areas, for urban areas holding periodic Customers Awareness Meets on the do's and do not's in conducting online transactions
9	Transactions through Cash on Delivery Mode	Engagement of SHG's in the rural areas, for urban areas no action is required

STATUS OF AWARENESS AND USE OF DIGITAL PRODUCTS / SERVICES

		OVERALL	***RURAL***	***URBAN***
1	Debit cards/ Micro ATM	High	High	High
2	Credit Cards	Low	Low	Medium
3	Mobile Banking (USSD/ UPI)/	Medium	Medium	Medium
4	NEFT (National Electronic Fund Transfer)	Low	Low	Medium
5	RTGS (Real Time Gross Settlement)	Low	Low	Low
6	ECS (Electronic Clearing System)	Low	Low	Low
7	IMPS (Immediate Payment Service)	Low	Low	Low
8	AEPS (Aadhar Enabled Payment System)	Low	Low	Low
9	E wallets / Mobile Wallets	Medium	Low	Medium
10	Bank Prepaid Cards	Low	Low	Low
11	Digishala	Low	Low	Low
12	Green Channel / Green Pin	Low	Low	Low

Benchmarking of High-Medium –Low Penetration given as per Table 10.2 in Appendix

ACTION FOR INCREASING PENETRATION BASED ON ABOVE FINDINGS

Sl no	PRODUCT	ACTION REQUIRED
1	ATM / Debit Cards/ Micro ATM	Overall no major action is required, holding Customers Awareness Meets on the do's and do not's of using ATM / Debit Cards to reeducate from time to time periodically
2	Credit Cards	Research required to make the product more customer friendly, create more awareness through advertisements to make the due amount of credit cards on time, motivating banks to promote credit cards by outsourcing the task of accessing credit worthiness of customers to third parties
3	Mobile Banking	Policy issues are involved, requires promotional offers, hold customers awareness meets for confidence building against misconceptions on online frauds, remove skepticism on the utility of the service by live demonstration through social and cultural platforms
4	NEFT	Research required to make the product more customer friendly, educate customers on the registration process for availing NEFT, make the specific software /portal for its use user friendly by including provisions of error checks / balances through checker verifier concepts.
5	RTGS	Research required to make the product more customer friendly, the policy of allocating limit for RTGS transaction may be reworked, policies related to regulate RTGS transaction may be made more flexible, need for creating awareness through advertisement for the unreached
6	ECS	Research required to evaluate policy issues are involved in rural operation, requirement of more empanelment of remote area banks under the Bank's mapping for inclusive growth, there is a need for creating awareness in rural areas
7	IMPS	Research required to evaluate policy issues, need for creating awareness of IMPS in general, scope to rework on the amount of transaction fee charged to make it more acceptable, educate on the mandatory seven digit Mobile Money Identifier (MMID) number that is required for IMPS and holding customers meet for spreading awareness on the process of its usage
8	AEPS	Policy issues are involved, further research required to make the

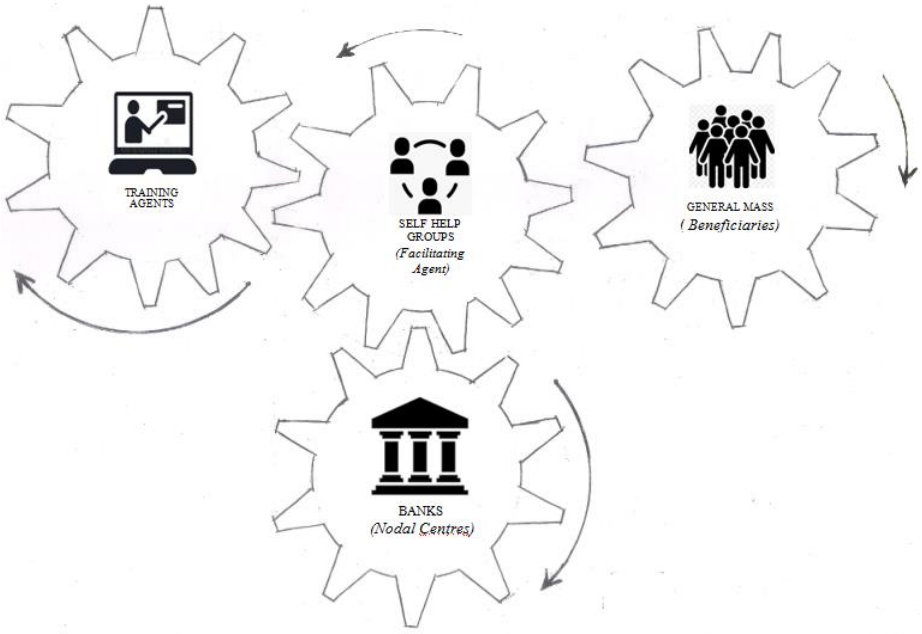
		product more customer friendly, need to solve technical issues in remote areas related to transaction failure, process of lodging complains in case of transaction failure needs to be streamlined, policy issues are involved as *Adhaar Cards* is still not mandatory in this part of the country, create awareness of DigiShala to promote AEPS, role of SHG's to promote it in the rural areas may be stressed.
9	E wallets / Mobile wallets	There is a need for creating awareness, product may be made more customer friendly to be accessible by the general mass, special role of SHG's to promote it in the rural areas may be stressed.
10	Bank Prepaid Cards	Policy issues are involved, requirement of institution of some nominal protection by bank for card holders if it is to be promoted, procedural process of availing Prepaid Cards may be made more user friendly.
11	Digishala	Need for creating mass awareness by organizing customer awareness meets on the DigiShala Service, need for engagement of SHGs for capacity building in the rural areas, to educate people on the use of DigiShala, master trainers may be used. Such master trainers may be selected and properly trained at designated Nodal Centres and then deputed for imparting trainings in respective districts.
12	Green Channel (SBI) / Green Pin	Need for creating mass awareness by organizing customer awareness meets on the use of Green Channel (SBI) / Green Pin by live demonstrations. Stress on the need to use Green Channel (SBI) / Green Pin as a part of the Green Marketing drive to save paper and the planet and sustain the future generation. Customers may be educated by direct face to face interaction, role of SHG's in rural areas.

OBJECTIVE 5: ROLE OF SOCIAL MARKETING TOWARDS DIGITALISATION

Based upon the findings of the fieldwork related to the current perception of common mass towards digitalization, identification of key persons in a family who conducts digital transactions, identifying the impending barriers in inculcating a culture of digital and cashless banking and the present status with respect to penetration of digital transaction in the daily life of the urban and rural masses, several advertisement themes has been identified as well as developed and relevant advertisement copy has been developed for each theme as selected. The themes are both in English and Assamese versions as below. This has been shown in Chapter 7, Table 7.1.

OBJECTIVE 6: MODEL OF USING SHG'S TOWARDS DIGITALISATION

A suggestive model is proposed for the promotion of digital movement in the state of Assam. The model comprises of four entities. They are the Banks, the Self Help Groups, the Training Institutes and the Target Beneficiaries as shown below



A MODEL FOR CAPACITY BUILDING TOWARDS DIGITALISATION

The primary goal of the Model is to create effective linkage of the mentioned four entities so as to educate the SHGs and the common mass in the aspect of financial literacy and processes related to availing digital products and services.

GLOSSARY

TERMS	MEANINGS
Beneficiary	A person who derived the benefit from something
Brick and Mortar	Presence of a set up physically
Cashless Transactions	Transactions done without physical banknotes or coins, but digitally
Demographic	Vital statistics of the human population
Demonetization	Withdrawal of specific coins and notes used as legal tender
Demotivation	Something that acts as a discouragement
Descriptive	Narrating in an purposeful and objective way without bias
Dichotomous	A combination of two options or parts
Digishala	A channel on DD to learn on digital payments
Digitalization	Converting text, pictures or sound into digital form in the computer
E wallets	An electronic card for making transactions through an online portal
Faceless, Paperless, Cashless	Use of digital money instead of paper money in an economy
Feature Phone	A mobile phone that has fewer features compared to a smart phone
FinTech	Specialized software and algorithms to manage financial transactions
Green channel	A channel of SBI for paperless deposit, withdrawal and remittance of money
Hassles	Filled with inconvenience and difficulty in the operation of something
HDFC's Chillr	A mobile app that allows to instantly transfer money to a desired contact
Jan Dhan A/c	A scheme to provide the poor people with bank accounts in India
MobiKwik	An Indian digital financial services platform to make online payment
Mobile wallets	A virtual wallet on a mobile device used to make payments
Nodal Centre	An agency to facilitate and enable some predetermined tasks
Paytm	A company offering multi-source and multi destination payment solutions
Penetration	The number of users or actual buyers of the product or service
Post Paid Instruments	An Instruments to do transactions on credit with the money to be paid later
Prepaid Instruments	An Instrument to buy something against value stored on the instruments
SBI's Buddy	A prepaid e-wallet of SBI to transfer money from person to person
Smart Phone	A mobile phone with multi-purpose and sophisticated computing features
Social marketing	A commercial marketing methods to deal with social issues
Tech Savvy	Have adequate knowledge of modern technological gadgets

LIST OF ABBREVIATIONS

AEPS	Aadhaar Enabled Payment System
ANOVA	Analysis of Variance
ASEB	Assam State Electricity Board
ASRLM	Assam State Rural Livelihoods Mission
COD	Cash on Delivery
CSR	Corporate Social Responsibility
DDU-GKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
ECS	Electronic Clearing System
IMPS	Immediate Payment Service
LPG	Liquefied Petroleum Gas
NEFT	National Electronic Fund Transfer
PIA	Project Implementing Agencies
PPP	Public Private Partnership
RRB's.	Regional Rural Banks
RTGS	Real Time Gross Settlement
SHG	Self Help Group
UPI	Unified Payments Interface
USP	Unique Selling Proposition
USSD	Unstructured Supplementary Service Data

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CHAPTER 1

INTRODUCTION AND BACKGROUND OF THE STUDY

This chapter includes the background of the study. It talks about the history of banking transactions and the current scenario of the banking and financial services sector. It presents the importance and relevance of the current study. A review of existing literature has been done to identify progress as well as prospects of digital economy and the issues cum challenges involved in moving towards a cashless economy. It presents the statement of the research problem, the objectives and research questions of the study.

1.1 Introduction

Banking transactions in the world can be traced back since the beginning of trade and commerce. However banking business in its modern sense originated in the last decade of the 18th Century. Banks in India have come a long way from conventional to convenience banking. Post the financial sector reforms of 1991 in India, most of the major banks started its journey towards E banking. Today the banking sector is moving towards rapid digitization or cashless banking system. In fact the benefits of business efficiency, cost savings, precise accuracy and improved competitiveness which can be attributed to digital banking may have paved the way towards cashless banking. At the same time the FinTech companies, which are fundamentally financial technology firms that facilitate banking and financial services are giving tough competition to the traditional "Brick and Mortar" banking in today's global scenario. It is said that over the next decade four transformative megatrends called big data, cloud computing, social media and mobility will shape global technology adoption. Hence it is important for the banking sector to adopt innovation through new technology interventions for survival in this Digital Banking Era.

The Government of India also launched its flagship "The Digital India Programme" on 1st July 2015 with a vision to transform India into a digitally empowered society and knowledge economy. One of the professed roles of Digital India is "Faceless, Paperless, and Cashless". As a step towards a digital cashless economy, the government has already made available various

facilities as well as different modes of digital payments like Banking cards, USSD, AEPS, UPI, mobile wallets, point of sale, internet and mobile banking and the like.

India also has experienced the announcement of its demonetization policy on 8th November 2016. It was made effective through country wide announcement of the invalidity of currency notes of denominations of ` 1000 and ` 500 by the Prime Minister of India Shri Narendra Modi. Demonitization in guise had given rise to the emergence of increasing cashless transactions in India.

A sharp increase in digital payment activity was observed post demonitization:

i. The number of UPI transactions rose from about `0.3 million in November 2016 to `2.0 million in December and further to `4.2 million in January 2018 and February 2018. The value of transactions increased 20 fold from ` 0.9 billion in November to about `19 billion in February. (Reserve bank of India, 2017)

ii. The usage of Post Paid instruments issued by non-banks was also noteworthy. A 42 percent increase in three months was observed with the value of transactions increasing from ` 13 billion to `19 billion. (Reserve bank of India, 2017)

iii. The growth in terms of app downloads and merchant acquisitions have been also phenomenal for major payment wallet companies such as Paytm, Free charge, Mobikwik, SBI's Buddy, and HDFC's Chillr. (Reserve bank of India, 2017)

At this critical juncture the need for making the people of our country aware of the available modes of digital transactions as well as the benefits of transacting digitally may be essentially felt by policymakers and administrators to move the nation forward in the desired direction.

1.2 Importance and relevance of the study

Today technologies related to information and communications technology (ICT) are far more all-encompassing than the earlier years. More people have access to a mobile phone that has led to the process of exponential growth with the generation of global data. As a fallout, increasingly

individuals, businesses and governments are making the best possible use of networks and applications. And for India to achieve advanced levels of digitization there is a requirement for mass adoption of connected digital technologies and applications in the economy. The argent need is to make programs and plans that focus on the widespread adoption and usage of technology as the thrust area. That includes educational digitization at the national level, along with methodical scheduling, tracking of the adopted efforts, developing sector governance mechanisms and taking on a systems approach for inclusive growth.

Before dwelving further into this topic the researchers would like to conduct an exploratory study through the review of existing literature and earlier research work done to identify issues and challenges in moving towards a cashless and digital economy.

1.3 Review of related research works

The researchers conducted an extensive review of existing literature from two broad perspectives. The first prespective looked at studies focussing on the prospects and progress towards a digital economy, whereas the second prespective tried to examine studies related to implementation and sustainance issues of a digital/ cashless economy in India.

1.3.1 Progress / propects of a digital economy

Happiest Minds Technologies Pvt. Ltd., (2014) examined the prospects of an Omni-channel strategy in the banking sector in India.The study highlights that it is time for the sector to renovate the banking experience for consumers. They opined that various banking channels are all working in silos without attempting to integrate their functions.This study concentrated on how technological developments could change the face of the banking sectors but it did not focus on the readiness for cashless transactions of the Indian population. Reserve bank of India, (2017) in their report highlighted the impant of Fintech on Global as well as Indian financial services. It focussed on the emarging regulatory and supervisory issues ensuining with the advent of Fintech and also provided a tentative roadmap for various stakeholders like regulators, supervisors, banks, NBFC's, insurance companies and consumers. Again, the current readiness of the Indian population remained ignored.Shendge and Shelar, (2017) tried to examine the impact and importance of a cashless economy in India.They observed that India is gradually transitioning

from a cash centric to a cashless economy and e payment services are gaining momentum with time. Bansal and Jain, (2018) in their study looked at the post demonitization progress of digital transactions in the Indian economy. It revealed that there had been significant increase in the volume as well as value of digital transactions post demonitization. Gomber, Kauffman, Parker and Weber, (2018) detailed the innovations, disruptions and transformations in the financial services sector on account of the Fintech revolution.

1.3.2 Issues and challenges

Wu, Jayawardhena, and Hamilton, (2014) in their study attempetd to examine the relationship between the preception on the usefulness of using internet banking with adoption of internet banking practices amongst discontinued users, users and non users of digital banking platforms. Al-Dalaien, (2017) tried to identify the challenges ahead for a cashless economy in India. The study was confined to 112 respondents residing in Aligarh, India. The researcher attempted to test the null hypothesis that there is no significant benefits of going towards a cashless economy for the general public and the results of the study also substantiated the null hypothesis.CS Ravi, (2017) tried to examine the impact of digital payment systems in the Indian economy on the development of rural India. The problems specific to rural india identified through this study revealed the rural india is not free from electricity problems, people residing in indian villages may not own smart phones or laptops,ATMs are not located within a close proximity, villagers also lack the awareness to conduct cash transactions online and may need necessary trainings for capacity building. This study identified the need for mass scale propagation of the Digital India campaign to increase awareness among Indian masses.Sinha, Joshi, and Kamani, (2017) also tried to understand consumers attitude towards cashless transactions. Primary data was collected from 150 respondents residing in Vadodhara, India. The research revealed that speed of operation and ease of operation were two major reasons why consumers preferred cashless transactions.Garg and Panchal, (2017) made an attempt to understand the views of people residing in Delhi on a cashless economy. This study identified that high illiteracy rate, cyber frauds, lack of transperancy and efficiency in digital payment systems could be the major hindrances on the path towards digitalisation.

Based on the above review, the researchers have identified that similar studies as cited above have not been conducted earlier in the north eastern region of the country. Assam being a gateway of the north east provides ample scope to explore the important issues and challenges on the path towards digitalisation. As such the researchers are definitely guided by earlier research works done in this line but have identified that the challenges and issues pertaining to the north eastern region of India could be very different from that of the other parts of the country.

Hence this proposed research enquiry would contribute additional inputs to the already existing stock of knowledge with special focus on the state of Assam in the north eastern region of India.

1.4 Statement of the problem:

The researchers feel that the impact of cashless and digitized banking would be comparatively less on the urban educated population as they are more or less within the gamut of cashless transactions through the use of plastic money, internet banking, mobile banking and the like. It is felt that the semi urban and rural sections will be more impacted and will take more time to cope with this impending move towards a cashless economy.

In India approximately two third of its population of some 870 millon people reside in rural India. It is also estimated that the number of connected rural consumers will increase from 120 million in 2015 to almost 315 million by 2020. Facts also report thatover 93 percent of people in rural India have not done any digital transactions (Jain and Sanghi, 2016). Hence the real challenge lies in capacity buildingn of the rural masses.

With the above background, the pertinent question that arises in the mind of the researchers is whether the country is prepared to face the forthcoming challenges considering the existing competence of the rural masses. The researchers through this study would like to delve deeper into this issue to identify capacity building measures which needs to be undertaken to face digitalization in a cashless banking economy.

Keeping the above issue in mind the researchers have formulated certain objectives to guide the current research enquiry.

1.5 Objective of the study

i. To study the current perception of common mass towards digitalization and cashless transactions.
ii. To identifying key persons in a family who conducts digital transactions.
iii. To identifying the impending barriers in inculcating a culture of digital and cashless banking.
iv. To know the present status with respect to penetration of digital transaction in the daily life of the urban/rural masses.
v. To explore the scope of social marketing in creating a positive environment towards digital and cashless banking (based upon the findings from objective 1 - objective 4).
vi. To explore the scope of using SHG's for promoting cashless banking to the illiterates in the rural areas and building mechanism for the same.

1.6 Research questions of the study

Marketing is the art of identifying the needs of the consumers and fulfilling them. Social marketing on the other hand is the process of marketing of concepts or ideas for social good or to bring about reformation in the society. Social marketing is also regarded as cause related marketing as its primary aim is to bring about social change. According to Kotler and Zaltman (1971), social marketing is the process of formulating, implementing and controlling programs with the goal of influencing the acceptance of ideas that are social by nature. It basically tries to bring social change for social benefit.

In rural India, due to limited exposure of the rural citizens towards the latest happenings of the country, changing the mindset of the consumers in favour of the movement towards digital and cashless banking economy is quite challenging. Further it is surmised that services of the local SHG's for popularising the concept of digital and cashless banking economy at the bottom of the pyramid may be explored in a positive way. Based upon the collection of the factual information from objective 1 to objective 4, the following research questions has been framed.

Question 1: Does Social Marketing does not have any role in creating a positive environment towards digital and cashless banking economy?

Question 2: Does SHG's have any role in promoting and building the mechanism towards a digital and cashless banking economy?

It is believed that information related to these two vital research questions would help in a major way for the creation of a positive environment towards digitalization and further help in building a mechanism combined with a befitting model respectively. At the same time, findings from question 1 and question 2 would help in fulfillment of objective 5 and objective 6. It is also desired to be utilized for developing specific and relevant social marketing advertisement campaigns to reach the target audience both in the rural and urban areas. Further a suitable model that can create a linkage between the three vital entities namely SHGs, Bank and the Beneficiaries (or customers) would help for capacity building among the common mass where the awareness cum usage of digital products (or facilities) is low and thereby inculcate a culture of digitalized environment among them to ensure inclusive growth.

CHAPTER 2

RESEARCH METHODOLOGY

This chapter presents the research methodology and the sampling method used for the survey. It presents the process of conducting the pilot survey and also describes the construction of the questionnaire used for carrying out the survey. It also presents the analysis tools used for analyzing the data collected from the field to meet the objectives of the study. It also includes the scope and limitations of the study.

2.1 Research methodology

The study is a combination of exploratory and descriptive research. The size of the sample to for the study is 2000. Each individual household is taken as a sampling unit. In the questionnaire, question no 1 to question no 5 is used to know the demographic profile of the respondents. In order to know the current perception of common mass towards digitalization (objective 1), question no 6 has been used in the questionnaire (as enclosed in the annexure). It consists of 9 attitudinal statements related to perception towards demonetization. The respondents have been asked to indicate their degree of agreement or disagreement on the statements with appropriate ratings, where 3 is ‘agree’, 2 is ‘neither agree nor disagree’ and 1 is ‘disagree’. The data gathered from the field survey is processed through simple mid value or average score and factor analysis. In order to identifying key persons in a family, who conducts digital transactions or are android phone savvy (objective 2), question no 7 and question no 8 has been used in the questionnaire. They are simple multiple choice questions. Data gathered through field work is processed through counts and percentages. In order to identifying the impending (perceptual) barriers in inculcating a culture of digital and cashless banking (objective 3), question no 9 has been used in the questionnaire. It consists of 9 attitudinal statements. The data gathered from the field survey is processed through simple mid value or average score and factor analysis. To know the present status with respect to penetration of digital transaction in the daily life of the rural mass (objective 4), question no 10 to question no 13 has been used in the questionnaire. Data gathered

is processed through counts and percentages. Objective 5 and Objective 6 are suggestive in nature.

2.2 Sampling method

The size of the sample to be taken for the study is 2000 which are the rural and urban inhabitants of the selected districts. Judgment sampling techniques has been used for selecting the villages / wards in the selected districts. The proportion of sample size for each district is determined on the basis of proportionate sampling technique. In the segregation of each determined size of the sample for each district between rural and urban, segregation is done based upon percentage of rural vs urban population of each district as per Census 2011. In the identification of rural and urban parts of the districts, areas/wards which are covered by a municipality board are considered as urban. On the other hand, areas which are not covered by any municipality board are considered as rural. Altogether 10 districts have been taken for the field work, details of which are given below as per Table 2.1 with the proportionate sampling size of the selected districts.

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Table 2.1: Proportionate Sampling Size of the Selected Districts

Sl no	Districts	Population as per Census 2011	Proportionate Sampling out of 2000*
1	Kamrup	1517542	185
2	Bongaigaon	738804	109
3	Goalpara	1008183	149
4	Barpeta	1693622	251
5	Kokrajhar	887142	131
6	Nalbari	771639	114
7	Tinsukia	1327929	196
8	Jorhat	1092256	162
9	Nowgaon	2823768	418
10	Sonitpur	1924110	285
	Total	**13784995**	**2000**

Total Sample Size = 2000 respondents

- *Calculation of the Proportionate Sampling out of 2000

$$= \frac{\text{POPULATION OF THE DISTRICT AS PER 2011 CENSUS}}{\text{TOTAL POPULATION OF ALL THE DISTRICT SELECTED}} \text{ X } 2000$$

Respective Sampling Plan is also given as per TABLE 2.2 giving break ups of the Rural and Urban Population of the Final Sample of each respective district selected.

Table 2.2 : Sampling plan

Sl no	Selected Districts	Population as per Census 2011	Proportionate Sample Size out of 2000	Percentage of Population as per Census 2011		Final Sample	
				Rural	Urban	Rural	Urban
1	KAMRUP	1253938	185	17.30	82.70	032	153
2	BONGAIGAON	738804	109	85.14	14.86	093	016
3	GOALPARA	1008183	149	86.31	13.69	129	020
4	BARPETA	1693622	251	91.30	08.70	229	022
5	KOKRAJHAR	887142	131	93.81	06.19	123	008
6	NALBARI	771639	114	89.28	10.72	102	012
7	TINSUKIA	1327929	196	80.06	19.94	157	039
8	JORHAT	1092256	162	79.81	20.19	129	033
9	NAGAON	2823768	418	86.91	13.09	363	055
10	SONITPUR	1924110	285	90.96	09.04	259	026
	TOTAL	**13521391**	**2000**	**-**	**-**	**1616**	**384**

Total Sample Size = 2000 respondents

2.3 Pilot survey

Initial pilot survey has been done for 30 respondents to test the validity of questions and scales used in the questionnaire. Originally the scales had 5 items. But later it was changed to 3 point scales keeping in mind the profile of the respondents. Due skill and diligence has been used to ensure that the questions framed, statements constructed and variables used are relevant and correct as per the envisaged objectives and the desire to elicit necessary response. Based upon the results of the pilot survey all the relevant and necessary questions, statements and variables were maintained and the redundant ones were discarded. Based upon the pilot survey the questionnaire has been finalized for the field work (details of which is given in the appendix).

2.4 Questionnaire construction and analysis used

In the questionnaire, question no 1 to question no 5 were used to know the *demographic profile* of respondents. In order to know the *categories of the district* two options namely *rural* and *urban* were used (used in question no 1). For knowing the *age of the respondents*, age gaps namely (i) 18-25 years, (ii) 26-35 years, (iii) 36- years (iv) 46-55 years, (v) 56-60 years and (vi) above 60 years were used. In order to know the *education level*, options namely (i) primary /uneducated, (ii) HSLC / HSSLC, (iii) Graduate and (iv) Post Graduate and above were used. For knowing the *Income Level (pa)*, options namely (i) Less than Rs 50000, (ii) Rs 50001 - 1 lakhs, (iii) above Rs 1 lakh - 5 lakhs, (iv) above Rs 5 lakhs were used. And in order to know the *occupation* options namely (i) Public Sector/ Government, (ii) Private Sector, (iii) Self employed, (iv) Professional and (v) Unemployed/housewife/student were used.

Objective no 1 was to know the *current perception of common mass towards digitalization*. In order to fulfill it, question no 6 has been used in the questionnaire (as enclosed in the annexure). It consists of 9 attitudinal statements (*TABLE 2.3: PERCEPTION TOWARDS DIGITALISATION SCALE)* related to perception towards digitalization. The statements have been developed based upon inputs from focus group interview (with senior banking Executives who have exposure to both urban and rural banking), journal papers (as per literature survey done), paper articles, online blogs, pilot survey and self intuition.

Initially the scales used for question 6 was subjected to reliability test i.e. Cronbach's Alpha. The reliability score of the scale has been found to be 0.73 which is acceptable as it is greater than 0.60 (Nunnally, 1976). Hence it can be accepted that reliability of the scales for question no 6 has been established and further analysis can be carried out. The respondents have been asked to indicate their degree of agreement or disagreement on the statements with appropriate ratings, where 3 is 'agree', 2 is 'neither agree nor disagree' and 1 is 'disagree'. The data gathered from the field survey is processed through simple mid value or average score. Relationships of

perceptual statements with demographical variables were tried to be established through ANOVA (inferential statistics).

Table 2. 3: Perception towards digitalisation scale

Sl no	STATEMENTS	Cronbach's Alpha
S1	Digital banking is meant for tech savvy people	0.73
S2	Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking	
S3	Digital and Cashless economy will help reduce the risk of holding cash	
S4	Cashless transactions have technology related issues	
S5	Cashless transactions are a more secure way of transacting	
S6	Banks should discourage branch visits to encourage digital transactions	
S7	I would feel comfortable doing cashless transactions	
S8	Digital transactions help me avail various discounts /offers	
S9	Digitalization will lead to overall progress and development of the country	

Objective no 2 was to identifying key persons in a family who conducts digital transactions. In order to *identifying key persons in a family, who conducts digital transactions* or are android phone savvy (objective 2), question no 7 and question no 8 has been used in the questionnaire. They are simple multiple choice questions. Question no 7 was intended to know the persons in your family who is Android phone savvy/ Tech savvy. For recording the answers, multiple choice answers were given namely (i) Husband (ii) Wife (iii) Children (iv) Elderly persons (v) Any other (vi) None. Similarly question no 8 was intended to know the persons in the family who makes online purchases. For recording the answers, multiple choice answers were given and the options were the same as given in question no 7 in the questionnaire. Data gathered through field work from question no 7 and question no 8 has been processed through counts and percentages. Chi-Square Tests is also used to investigate relationship between demographic variables and response of key person in the family who is Phone/Tech savvy.

Objective no 3 tried to identifying the impending (perceptual) barriers in inculcating a culture of digital and cashless banking. In order to fulfill the objective, question no 9 has been used in the

questionnaire. It consists of 9 attitudinal statements (*TABLE 2.2: PERCEPTUAL BARRIERS TOWARDS DIGITALISATION SCALE).* The statements have been developed in a similar way as used for question no 6 of the questionnaire.

Initially the scales used for question 9 was subjected to reliability test i.e. Cronbach's Alpha. The reliability score of the scale has been found to be 0.77 which is acceptable as it is greater than 0.60 (Nunnally, 1976). Hence it can be accepted that reliability of the scales for question no 9 has been established and further analysis can be carried out. The respondents have been asked to indicate their degree of agreement or disagreement on the statements with appropriate ratings, where 3 is 'agree', 2 is 'neither agree nor disagree' and 1 is 'disagree'. The data gathered from the field survey is processed through simple mid value or average score. Relationships of perceptual statements with demographical variables were tried to be established through ANOVA (inferential statistics).

Table 2.4: Perceptual barriers towards digitalisation scale

Sl no	STATEMENTS	Cronbach's Alpha
S1	Digital transactions are very complicated and full of hassles	
S2	In digital transactions, there is perceived risk of fraud	
S3	A culture of digital and cashless banking is missing	
S4	People are not aware of all the digital products which are available and its usage	
S5	There is a risk of committing errors and losing money	0.77
S6	The processes involved in conducting digital transactions are not easy to understand	
S7	It is a technical subject and beyond the comprehension of common masses	
S8	Electricity and Internet connectivity issues are involved	
S9	Impending barriers retard the growth and progress of overall digitalization of the country.	

Objective no 4 tried to know the *present status with respect to penetration of digital transaction in the daily life of the rural mass*, question no 10 to question no 13 has been used in the questionnaire.

Question no 10 has been used to know the status of penetration of digital facilities / products that facilitates the conduct of digital transactions. The different digital facilities / products that has been considered are possession of (i) *Jan Dhan Account*, (ii) *Savings Bank Account*, (iii) *Adhaar Card* and (iv) *Mobile Phone* (that includes both *Feature Phone* and *Android Phone*). Respondents were required to give answers either in *yes* or *no* form (details given in Chapter 6).

Question no 11 has been used to know the status of penetration of different modes of banking services. To record the status three different modes of availing banking services namely (i) *availing the services by visiting the bank personally*, (ii) *availing the services of banking correspondent / agents* and (iii) *availing banking services by online mode through mobile phone/computers* have been used. Respondents were required to give answers in *yes* or *no* form (details given in Chapter 6).

Question no 12 includes a list of 9 different transactions that are required to be done in the day to day life. They are (i) *Online payment of Mobile Phone Bill*, (ii) *Online payment of Electricity Bill*, (iii) *Online payment of Property Tax Bill*, (iv) *Booking of LPG Gas online / sms mode*, (v) *Online payment for LPG Gas refilling*, (vi) *Online Net Banking/Mobile Banking*, (vii) *Cashless (Debit Card /Card/Paytm) Payment*, (viii) *Buying goods / services online* and (ix) *Transactions through Cash on Delivery mode*. Respondents were asked answer either in *yes* or *no* form (details given in Chapter 6).

Question no 13 is used to know the status of awareness and use of various digital products / services and includes a list of 12 different digital products / services. They are (i) *Debit cards/ Micro ATM*, (ii) *Credit Cards*, (iii) *Mobile Banking (USSD/ UPI)*, (iv) *NEFT (National Electronic Fund Transfer)*, (v) *RTGS (Real Time Gross Settlement)*, (vi) *ECS (Electronic Clearing System)*, (vii) *IMPS (Immediate Payment Service)*, (viii) AEPS *(Aadhar Enabled Payment System)*, (ix) *E wallets / Mobile Wallets*, (x) *Bank Prepaid Cards*, (xi) *Digishala and* (xii) *Green Channel / Green Pin*.

Data gathered is processed through simple counts and percentages from question no 10 to question no 13 of the questionnaire.

Objective 5 tried to explore the scope of social marketing in creating a positive environment towards digital and cashless banking and **objective 6** tried to explore the scope of using SHG's for promoting cashless banking to the illiterates in the rural areas and building mechanism for the same. The methodology for objective 5 and objective 6 are exploratory cum suggestive in nature.

Translation of the Questionnaire from English to Assamese: The questionnaire which was originally developed in English was translated into Assamese language to make it more respondent friendly.

2.5 Scope of the study

The study was confined within the State of Assam. The time period of the study was for 6 months from July to December, 2019.

2.6 Limitations of the study

Total sample size is only 2000 units. The study would have been more representative if all the districts were taken into consideration. At the same time total enumeration i.e. Census Survey would have made the findings even more towards perfection.

CHAPTER 3

PERCEPTION OF COMMON MASS TOWARDS DIGITALIZATION AND CASHLESS TRANSACTIONS

This chapter provides a brief background on the meaning of perception. It presents the demographic profile of the respondents considered for the study . It presents the analyis and findings pertaining to the current perception of the common mass towards digitalization and cashless transactions.

3.1 Background:

Perception is a state of the mind. It is the capability to recognize, hear, or become conscious of something through the sense organs. According to the *Merriam Webster Dictionary* (2019), it is the awareness of the elements of environment through physical sensation. Therefore the word perception basically deals with how people see the world and make some meaningful constructs and understanding. In the context of digitalisation in India, knowledge of the current perception of common mass is essentially required to know the level of understanding on digitalisation and the way people look at the move.Correct understanding of the mind of the people will enable to know the status of its acceptance as well as its progress. This will help to develop necessary remedial measures to remove misunderstanding and clarify doubts in a relevant and acceptable manner by the people. Accordingly the first objective for this research study has been formulated as;

To study the current perception of common mass towards digitalization and cashless transactions.

With the background information as cited above, an effort is made to know the current perception of common mass towards digitalization and cashless transactions. Initial demographic profile of the respondents is studied and then an effort is made to know the current perception.

3.2 Demographic profile of the respondents:

The researcher would first like to present the demographic profile of the respondents considered for this study (Table 3.1). From the Table 3.1the following observations may be noted:

i. 80.8 percent of the respondents represent the Rural population and 19.2 percent represent Urban population.

ii. Majority of the respondents are in the age group of 18-25 years (35.1 percent)

iii. Majority of the respondents are graduates (50.6 percent)

iv. Majority of the respondents are in the income group of 1-5 lakhs per annum (50.6 percent)

v. Majority of the respondents are unemployed/housewives/students(30 percent)

Table 3. 1: Demographic Profile of the respondents

Factors considered		**Frequency**	**Percent**
Location	Rural	1616	80.8
	Urban	384	19.2
	Total	**2000**	**100.0**
Age	18-25 years	702	35.1
	26-35 years	468	23.4
	36-45 years	390	19.5
	46-55 years	255	12.8
	56-60 years	129	6.5
	Above 60 years	56	2.8
	Total	**2000**	**100.0**
Education	Primary /uneducated	146	7.3
	HSLC / HSSLC	437	21.9
	Graduate	1011	50.6
	Postgraduate and above	406	20.3
	Total	**2000**	**100.0**
Income	Less than 50000	720	36.0
	50001-1 lakhs	115	5.8
	above 1 lakh -5 lakhs	904	45.2
	Above 5 lakhs	261	13.1
	Total	**2000**	**100.0**
Profession	Public Sector/ Government	424	21.2
	Private Sector	445	22.3
	Self employed	531	26.5
	Unemployed/housewife/student	600	30.0
	Total	**2000**	**100.0**

Source: Field survey

3.3 Analysis of the current perception of common masses towards digitalization and cashless transactions:

This section attempts to find out the most agreed perception about digitalization and cashless transactions among the respondents. The frequencies of the respondent's agreement/disagreement to certain pre-identified statements were analysed for this purpose. A score of 1 indicated disagreement, 2 neither agreement nor disagreement and a score of 3 indicated agreement to the statements. The mean of the responses were computed to find out the most agreeable perception. It has been computed in the following manner:

Weighted Average of:

Digital and Cashless economy will help reduce the risk of holding cash

= (1*187+2*666+3*1147)/2000= 2.480

Likewise the weighted mean has been calculated for the other statements. The statements have been presented in the descending order of their means in Table 3.2. The frequency (count of responses) in each category of the statements has been presented in Figure: 3.1.

Table 3. 2: Common Perceptions about Digitalization

Common Perceptions	Disagree (1)	Neither agree nor disagree (2)	Agree (3)	Mean
Digital and Cashless economy will help reduce the risk of holding cash	187	666	1147	2.48
Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking	183	676	1141	2.48
Digitalization will lead to overall progress and development of the country	221	699	1080	2.43
Cashless transactions have technology related issues	198	825	977	2.39
I would feel comfortable doing cashless transactions	328	611	1061	2.37
Cashless transactions are a more secure way of transacting	243	869	888	2.32
Digital transactions help me avail various discounts /offers	335	686	979	2.32
Digital banking is meant for tech savvy people	401	630	969	2.29
Banks should discourage branch visits to encourage digital transactions	606	831	563	1.98

Source: Field survey

From the Table 3.2 and Figure 3.1 it is observed that respondents perceive that digital and cashless economy will help reduce the risk of holding cash (Highest Mean=2.480; Highest count on "Agree"=1147). Also they perceive it as very convenient as it is anytime anywhere banking (Second Highest Mean=2.479; Second Highest count on "Agree"=1141).

Also it is observed that respondents do not perceive that banks should discourage branch visits to encourage digital transactions (Lowest Mean=1.978; Lowest count on "Agree"=563)

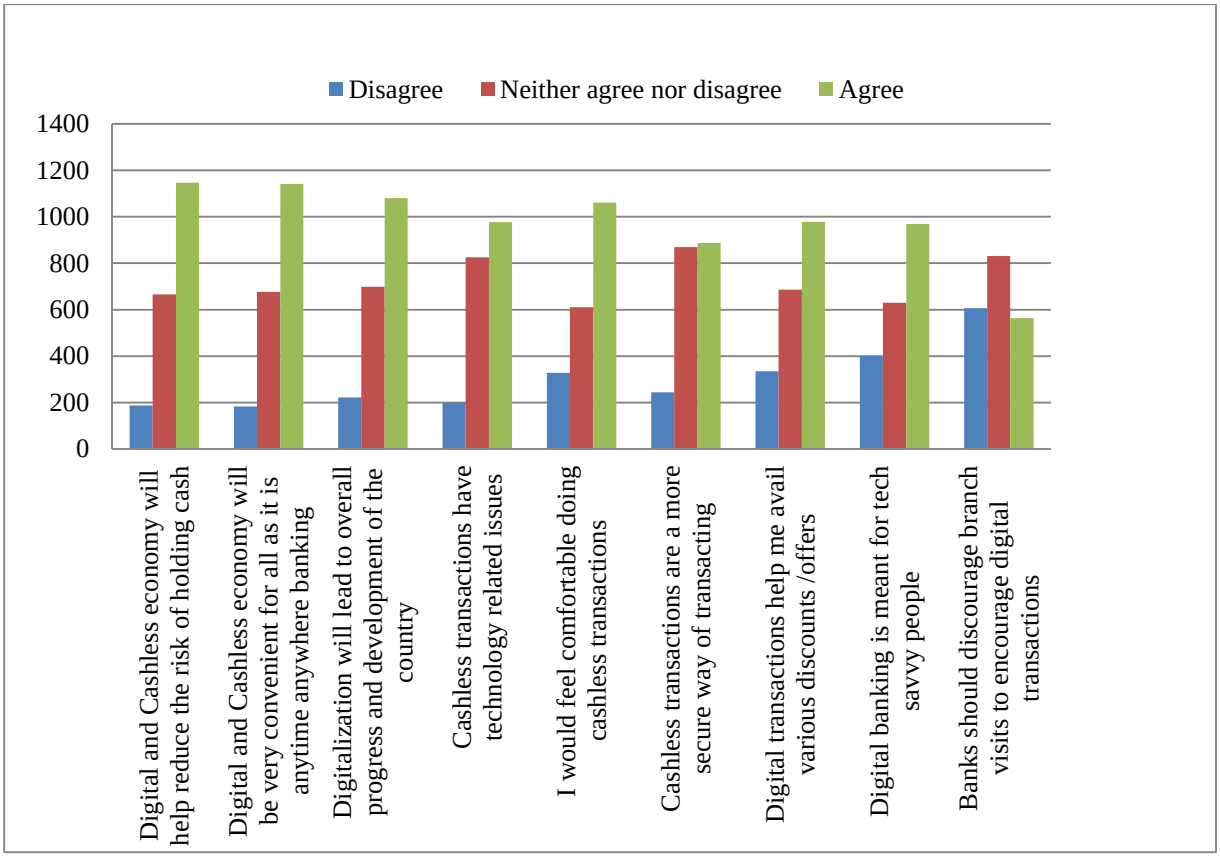

Figure 3.1: Count of the responses related to perception on digitalization and cashless transactions

Source: Field survey

3.3.1 Effect of location on perception towards digitalization and cashless transactions:

To examine whether there exists any significant differences in the perception of respondents towards digitalization and cashless transactions on the basis of urban and rural locations an Independent sample 't' test was conducted at a significance level of 5% (α=0.05). The different perceptions are taken as the test variables (dependent variable) while the respondents' place of residence is taken as the grouping variable (independent variable).

Hence the following hypothesis was framed and tested:

Ho_1: There is no significant difference in the perception towards digitalization and cashless transactions on the basis of respondents residing in urban and rural location at 95% confidence level.

The results of the t test as shown in Table 3.3 indicate that the null hypothesis, that there is no significant differences in the means of the perception that digital and cashless economy will help reduce the risk of holding cash (p=0.07), cashless transactions have technology related issues (p=0.89), cashless transactions are a more secure way of transacting (p=0.31), banks should discourage branch visits to encourage digital transactions (p=0.72), people would feel comfortable doing cashless transactions (p=0.11) digital transactions help people avail various discounts /offers (p=0.78) and that digitalization will lead to overall progress and development of the country(p=0.45) with respect to the place of residence of the respondents cannot be rejected (p-value is more than α= 0.05 in all cases). This indicates that the above mentioned perceptions on digitalization and cashless transactions do not vary significantly with respect to the place of residence of the respondents.

Table 3. 3: Perception towards digitalization and cashless transactions w.r.t location

Perception towards digitalization and cashless transactions	Location	N	Mean	SD	t	df	Sig. (2-tailed)
Digital banking is meant for tech savvy people	Rural	1616	2.33	0.75	4.79*	536.10*	0.00
	Urban	384	2.10	0.85			
Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking	Rural	1616	2.46	0.67	-3.32*	625.14*	0.00
	Urban	384	2.57	0.60			
Digital and Cashless economy will help reduce the risk of holding cash	Rural	1616	2.49	0.66	1.83	1998.00	0.07
	Urban	384	2.42	0.67			
Cashless transactions have technology related issues	Rural	1616	2.39	0.66	0.13	1998.00	0.89
	Urban	384	2.39	0.66			
Cashless transactions are a more secure way of transacting	Rural	1616	2.31	0.68	-1.02	1998.00	0.31
	Urban	384	2.35	0.66			
Banks should discourage branch visits to encourage digital transactions	Rural	1616	1.98	0.77	0.35	1998.00	0.72
	Urban	384	1.97	0.76			
I would feel comfortable doing cashless transactions	Rural	1616	2.35	0.76	-1.60	609.84*	0.11
	Urban	384	2.42	0.71			
Digital transactions help me avail various discounts /offers	Rural	1616	2.32	0.75	0.28	1998.00	0.78
	Urban	384	2.31	0.72			
Digitalization will lead to overall progress and development of the country	Rural	1616	2.42	0.69	-0.75	1998.00	0.45
	Urban	384	2.45	0.67			

*The t and df were adjusted because variance were not equal.

Source: Field survey

However we notice that the difference in the mean is significant with respect to place of residence on the perception that digital banking is meant for tech savvy people (p=0.00) and that digital and cashless economy will be very convenient for all as it is anytime anywhere banking (p=0.00) .

From descriptive statistics we can observe that respondents in the rural areas are more agreeable to the statement that digital banking is meant for tech savvy people.

We also observe from the descriptive statistics that respondents in the urban areas are more agreeable to the statement that digital and cashless economy is very convenient for all as it is anytime anywhere banking

3.3.2 Effect of demographic factors on the perception towards digitalization and cashless transactions:

To examine whether there exists any significant differences in the perception of respondents towards digitalization and cashless transactions on the basis of select demographic variables a One way ANOVA was conducted at a significance level of 5% (α=0.05). The dependent variables for the study are the perceptions towards digitalization and cashless transactions. These dependent variables are 1) Digital banking is meant for tech savvy people 2) Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking 3) Digital and Cashless economy will help reduce the risk of holding cash 4) Cashless transactions have technology related issues 5) Cashless transactions are a more secure way of transacting 6) Banks should discourage branch visits to encourage digital transactions 7) I would feel comfortable doing cashless transactions 8) Digital transactions help me avail various discounts /offers and 9) Digitalization will lead to overall progress and development of the country. The independent variables considered are age, education, income and occupation.

a. Effect of age group:

The following hypothesis was framed and tested:

Ho_2: There is no significant difference in the perception towards digitalization and cashless transactions on the basis of the age group of the respondents at 95% confidence level.

A statistically significant difference was not found among the six age groups on the perception that cashless transactions have technology related issues $F(5,194)=0.77$, $p=0.57$(Table 3.4).

Table 3.4 : One way ANOVA to test the significant difference in the mean, of the perception on digitalization and cashless banking with respect to age group

Perception on digitalization and cashless banking		df	F	Sig.
Digital banking is meant for tech savvy people	Between Groups	5	5.29	0.00
	Within Groups	1994		
	Total	1999		
Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking	Between Groups	5	5.05	0.00
	Within Groups	1994		
	Total	1999		
Digital and Cashless economy will help reduce the risk of holding cash	Between Groups	5	2.20	0.05
	Within Groups	1994		
	Total	1999		
Cashless transactions have technology related issues	Between Groups	5	0.77	0.57
	Within Groups	1994		
	Total	1999		
Cashless transactions are a more secure way of transacting	Between Groups	5	4.06	0.00
	Within Groups	1994		
	Total	1999		
Banks should discourage branch visits to encourage digital transactions	Between Groups	5	4.66	0.00
	Within Groups	1994		
	Total	1999		
I would feel comfortable doing cashless transactions	Between Groups	5	12.29	0.00
	Within Groups	1994		
	Total	1999		
Digital transactions help me avail various discounts /offers	Between Groups	5	9.33	0.00
	Within Groups	1994		
	Total	1999		
Digitalization will lead to overall progress and development of the country	Between Groups	5	5.81	0.00
	Within Groups	1994		
	Total	1999		

Source: Field survey

For all the other perceptions on digitalization and cashless transactions viz, digital banking is meant for tech savvy people $F(5,1994)=5.29$, $p=0.00$, digital and cashless economy will be very convenient for all as it is anytime anywhere banking $F(5,1994)=5.05$, $p=0.00$, digital and cashless economy will help reduce the risk of holding cash $F(5,1994)=2.20$, $p=0.05$, cashless transactions are a more secure way of transacting $F(5,1994)=4.06$,$p=0.00$, banks should discourage branch visits to encourage digital transactions $F(5,1994)=4.66$, $p=0.00$, people would feel comfortable doing cashless transactions $F(5,1994)=12.29$, $p=0.00$, digital transactions help people avail various discounts /offers $F(5,1994)=9.33$, $p=0.00$ and that digitalization will lead to overall progress and development of the country $F(5,1994)=5.81$, $p=0.00$, the differences in the means was found to be statistically significant($p<0.05$).Hence the null hypothesis is rejected and

the alternate hypothesis , that there exist significant difference in the perception of the respondents on digitalization and cashless transactions with respect to age group, is accepted.

Table 3.5 presents the descriptive statistics for the significant differences in the above means of the perception of the respondents on digitalization and cashless transactions with respect to age group of the respondents.

From Table 3.5 the following observations can be made:

i. Respondents in the age group of 36-45 years is more agreeable to the statement that "Digital banking is meant for tech savvy people" whereas respondents in the age group 18-25 is least agreeable to this statement.
ii. Respondents in the age group of 18-25 years is more agreeable to the statement that "Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking" whereas respondents in the age group 56-60 is least agreeable to this statement.
iii. Respondents in the age group of 18-25 years is more agreeable to the statement that "Digital and Cashless economy will help reduce the risk of holding cash" whereas respondents in the age group 46-55 is least agreeable to this statement.
iv. Respondents in the age group of 18-25 years is more agreeable to the statement that "Cashless transactions are a more secure way of transacting" whereas respondents in the age group 46-55 and Above 60 is least agreeable to this statement.
v. Respondents in the age group of 18-25 years is more agreeable to the statement that "Banks should discourage branch visits to encourage digital transactions" whereas respondents in the age group above 60 years is least agreeable to this statement.
vi. Respondents in the age group of 18-35 years is more agreeable to the statement that "I would feel comfortable doing cashless transactions" whereas respondents in the age group above 60 years is least agreeable to this statement.
vii. Respondents in the age group of 18-35 years is more agreeable to the statement that "Digital transactions help me avail various discounts /offers" whereas respondents in the age group 46-55 years is least agreeable to this statement.
viii. Respondents in the age group of 18-35 years is more agreeable to the statement that "Digitalization will lead to overall progress and development of the country" whereas respondents in the age group 46-55 years is least agreeable to this statement.

Table 3.5 : Descriptive Statistics for significant difference in the mean, of the perception on digitalization and cashless banking with respect to age group

Perceptions	Age Group	N	Mean
Digital banking is meant for tech savvy people	**18-25 years**	**702**	**2.17**
	26-35 years	468	2.31
	36-45 years	**390**	**2.41**
	46-55 years	255	2.33
	56-60 years	129	2.29
	Above 60 years	56	2.36
	Total	2000	2.28
Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking	**18-25 years**	**702**	**2.53**
	26-35 years	468	2.52
	36-45 years	390	2.47
	46-55 years	255	2.35
	56-60 years	**129**	**2.30**
	Above 60 years	56	2.50
	Total	2000	2.48
Digital and Cashless economy will help reduce the risk of holding cash	**18-25 years**	**702**	**2.53**
	26-35 years	468	2.49
	36-45 years	390	2.47
	46-55 years	**255**	**2.38**
	56-60 years	129	2.42
	Above 60 years	56	2.45
	Total	2000	2.48
Cashless transactions are a more secure way of transacting	**18-25 years**	**702**	**2.38**
	26-35 years	468	2.37
	36-45 years	390	2.29
	46-55 years	**255**	**2.18**
	56-60 years	129	2.29
	Above 60 years	**56**	**2.18**
	Total	2000	2.32
Banks should discourage branch visits to encourage digital transactions	**18-25 years**	**702**	**2.02**
	26-35 years	468	2.08
	36-45 years	390	1.88
	46-55 years	255	1.88
	56-60 years	129	1.91
	Above 60 years	**56**	**1.86**
	Total	2000	1.98
I would feel comfortable doing cashless transactions	**18-25 years**	**702**	**2.47**
	26-35 years	**468**	**2.47**
	36-45 years	390	2.28
	46-55 years	255	2.23
	56-60 years	129	2.16
	Above 60 years	**56**	**1.98**
	Total	2000	2.37

Perceptions	Age Group	N	Mean
Digital transactions help me avail various discounts /offers	**18-25 years**	**702**	**2.43**
	26-35 years	468	2.39
	36-45 years	390	2.24
	46-55 years	**255**	**2.14**
	56-60 years	129	2.17
	Above 60 years	56	2.20
	Total	2000	2.32
Digitalization will lead to overall progress and development of the country	**18-25 years**	**702**	**2.50**
	26-35 years	468	2.49
	36-45 years	390	2.35
	46-55 years	**255**	**2.29**
	56-60 years	129	2.40
	Above 60 years	56	2.32
	Total	2000	2.43

Source: Field survey

It can be noted that respondents in the age group of 18-25 are more open to the concept of digitalization and cashless banking than respondents in the senior age groups viz. 45 and above. Hence to popularize digitalization and cashless economy, policymakers should focus changing the attitude of people towards digitalization in the age group of 45 years and above.

b. Effect of Education:

Similarly for education level the following hypothesis was framed and tested:

Ho_2: There is no significant difference in the perception towards digitalization and cashless transactions on the basis of the education of the respondents at 95% confidence level.

A statistically significant difference was not found across the four education levels, on the perception that digital banking is meant for tech savvy people $F(3,1996)=0.87$, $p=0.46$ and that cashless transactions have technology related issues $F(3,1996)=0.86$, $p=0.46$.

For all the other perceptions on digitalization and cashless transactions viz, digital and cashless economy will be very convenient for all as it is anytime anywhere banking $F(3,1996)=22.75$, $p=0.00$, digital and cashless economy will help reduce the risk of holding cash $F(3,1996)=11.01$, $p=0.00$, cashless transactions are a more secure way of transacting $F(3,1996)=16.06$, $p=0.00$, banks should discourage branch visits to encourage digital transactions $F(3,1996)=3.96$, $p=0.01$, people would feel comfortable doing cashless transactions $F(3,1996)=52.49$, $p=0.00$, digital transactions help people avail variousdiscounts /offers $F(3,1996)=62.74$, $p=0.00$ and that digitalization will lead to overall progress and development of the country $F(3,1996)=15.05$, $p=0.00$, the differences in the means was found to be statistically significant ($p<0.05$). Hence the

null hypothesis is rejected and the alternate hypothesis, that there exist significant difference in the perception of the respondents on digitalization and cashless transactions with respect to education, is accepted.

Table 3.6 : Descriptive Statistics for significant difference in the mean, of the perception on digitalization and cashless banking with respect to education level

Perception	Education level	N	Mean
Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking	**Primary /uneducated**	**146**	**2.24**
	HSLC / HSSLC	437	2.31
	Graduate	1011	2.55
	Postgraduate and above	**406**	**2.57**
	Total	2000	2.48
Digital and Cashless economy will help reduce the risk of holding cash	**Primary /uneducated**	**146**	**2.28**
	HSLC / HSSLC	437	2.39
	Graduate	**1011**	**2.55**
	Postgraduate and above	406	2.48
	Total	2000	2.48
Cashless transactions are a more secure way of transacting	**Primary /uneducated**	**146**	**2.08**
	HSLC / HSSLC	437	2.20
	Graduate	**1011**	**2.39**
	Postgraduate and above	406	2.37
	Total	2000	2.32
Banks should discourage branch visits to encourage digital transactions	**Primary /uneducated**	**146**	**1.84**
	HSLC / HSSLC	437	1.93
	Graduate	1011	1.98
	Postgraduate and above	**406**	**2.07**
	Total	2000	1.98
I would feel comfortable doing cashless transactions	**Primary /uneducated**	**146**	**1.92**
	HSLC / HSSLC	437	2.10
	Graduate	**1011**	**2.50**
	Postgraduate and above	406	2.47
	Total	2000	2.37
Digital transactions help me avail various discounts /offers	**Primary /uneducated**	**146**	**1.80**
	HSLC / HSSLC	437	2.06
	Graduate	**1011**	**2.46**
	Postgraduate and above	406	2.45
	Total	2000	2.32
Digitalization will lead to overall progress and development of the country	**Primary /uneducated**	**146**	**2.14**
	HSLC / HSSLC	437	2.35
	Graduate	**1011**	**2.50**
	Postgraduate and above	406	2.45
	Total	2000	2.43

Source: Field survey

Table 3.6 presents the descriptive statistics for the significant differences in the above means of the perception of the respondents on digitalization and cashless transactions with respect to education level of the respondents.

From Table 3.6 the following observations can be made:

i. Respondents who are post graduates and above are more agreeable to the statement that "Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking" whereas respondents who have primary education or are uneducated are least agreeable to this statement.
ii. Respondents who are graduates are more agreeable to the statement that "Digital and Cashless economy will help reduce the risk of holding cash" whereas respondents who have primary education or are uneducated are least agreeable to this statement.
iii. Respondents who are graduates are more agreeable to the statement that "Cashless transactions are a more secure way of transacting" whereas respondents who have primary education or are uneducated are least agreeable to this statement.
iv. Respondents who are post graduates and above are more agreeable to the statement that "Banks should discourage branch visits to encourage digital transactions" whereas respondents who have primary education or are uneducated are least agreeable to this statement.
v. Respondents who are graduates are more agreeable to the statement that "I would feel comfortable doing cashless transactions" whereas respondents who have primary education or are uneducated are least agreeable to this statement.
vi. Respondents who are graduates are more agreeable to the statement that "Digital transactions help me avail various discounts /offers" whereas respondents who have primary education or are uneducated are least agreeable to this statement.
vii. Respondents who are graduates are more agreeable to the statement that "Digitalization will lead to overall progress and development of the country" whereas respondents who have primary education or are uneducated are least agreeable to this statement.

Overall it is noted that respondents with relatively higher education level is more positive towards embracing digitalization and cashless banking than respondents with lesser education. Hence the focus of the promoters of digitalization should be on the less educated sections of the

population because they seem to be relatively less confidant on the benefits and use of digitalization and cashless banking.

c. Effect of Income:

Similarly for income level the following hypothesis was framed and tested:

Ho_3: There is no significant difference in the perception towards digitalization and cashless transactions on the basis of the income of the respondents at 95% confidence level.

A statistically significant difference was found across the income level only on the perception that digital transactions help people avail various discounts /offers $F(3,1996)=2.86$, $p=0.04$. Hence in this case the null hypothesis was rejected to conclude that the perception that digital transactions help people avail various discounts /offers varies with respect to the income level of the respondents.

Table 3.7 presents the descriptive statistics for the significant differences in the means of the perception of the respondents that digital transactions help people avail various discounts /offers varies with respect to income level.

Table 3. 7: Descriptive Statistics for significant difference in the mean, of the perception on digitalization and cashless banking with respect to income level

Perceptions	Income level	N	Mean
Digital transactions help me avail various discounts /offers	**Less than 50000**	**720**	**2.38**
	50001-1 lakhs	115	2.36
	above 1 lakh -5 lakhs	904	2.28
	Above 5 lakhs	261	2.30
	Total	2000	2.32

Source: Field survey

From the Table 3.7 is can be observed that respondents with less than 50000 income are more agreeable to the statement that digital transactions help in availing various discounts and offers. However respondents in the income group of above 1 lakh - 5 lakhs are least agreeable to the statement. This implies that discounts and offers help attract people in the lesser income levels towards digitalization and cashless banking more than people in the higher income levels.

For all the other perceptions on digitalization and cashless transactions viz, digital banking is meant for tech savvy people $F(3,1996)=1.77$, $p=0.15$,digital and cashless economy will be very convenient for all as it is anytime anywhere banking $F(3,1996)=2.36$, $p=0.07$, digital and cashless economy will help reduce the risk of holding cash $F(3,1996)=2.19$, $p=0.09$, cashless transactions have technology related issues $F(3,1996)=2.38$, $p=0.07$,cashless transactions are a

more secure way of transacting F(3,1996)=1.06, p=0.37, banks should discourage branch visits to encourage digital transactions F(3,1996)=2.33, p=0.07, people would feel comfortable doing cashless transactions F(3,1996)=0.42, p=0.74, and that digitalization will lead to overall progress and development of the country F(3,1996)=0.90, p=0.44, the differences in the means was found to be statistically significant (p>0.05). Hence the null hypothesis is accepted that there exist no significant difference in the above mentioned perception of the respondents on digitalization and cashless transactions with respect to income level.

d. Effect of Profession:

Similarly for income level the following hypothesis was framed and tested:

H_{O4}: There is no significant difference in the perception towards digitalization and cashless transactions on the basis of the profession of the respondents at 95% confidence level.

A statistically significant difference was not found on the perception that digital and cashless economy will help reduce the risk of holding cash F(3,1996)=1.93, p=0.12 and that cashless transactions have technology related issues F(3,1996)=1.80, p=0.15 with respect to the profession of the respondents.

For all the other perceptions on digitalization and cashless transactions viz, digital banking is meant for tech savvy people F (3,1996)=3.00, p=0.03, digital and cashless economy will be very convenient for all as it is anytime anywhere banking F(3,1996)=4.52, p=0.00, cashless transactions are a more secure way of transacting F(3,1996)=4.10, p=0.01,banks should discourage branch visits to encourage digital transactions F(3,1996)=4.92, p=0.00, people would feel comfortable doing cashless transactions F(3,1996)=4.63, p=0.00, digital transactions help people avail various discounts /offers F(3,1996)=3.24, p=0.02 and that digitalization will lead to overall progress and development of the country F(3,1996)=2.98, p=0.03 the differences in the means was found to be statistically significant (p<0.05). Hence the null hypothesis is rejected and the alternate hypothesis, that there exist significant difference in the perception of the respondents on digitalization and cashless transactions with respect to profession, is accepted.

Table 3.8 presents the descriptive statistics for the significant differences in the above means of the perception of the respondents on digitalization and cashless transactions with respect to profession of the respondents.

Table 3.8: Descriptive Statistics for significant difference in the mean, of the perception on digitalization and cashless banking with respect to profession.

Perceptions	Profession	N	Mean
Digital banking is meant for tech savvy people	**Public Sector/ Government**	**424**	**2.33**
	Private Sector	445	2.32
	Self employed	531	2.30
	Unemployed/housewife/student	**600**	**2.21**
	Total	2000	2.28
Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking	**Public Sector/ Government**	**424**	**2.52**
	Private Sector	445	2.51
	Self employed	**531**	**2.39**
	Unemployed/housewife/student	600	2.51
	Total	2000	2.48
Cashless transactions are a more secure way of transacting	Public Sector/ Government	424	2.36
	Private Sector	445	2.32
	Self employed	**531**	**2.24**
	Unemployed/housewife/student	**600**	**2.37**
	Total	2000	2.32
Banks should discourage branch visits to encourage digital transactions	Public Sector/ Government	424	1.96
	Private Sector	**445**	**2.05**
	Self employed	**531**	**1.88**
	Unemployed/housewife/student	600	2.02
	Total	2000	1.98
I would feel comfortable doing cashless transactions	Public Sector/ Government	424	2.39
	Private Sector	445	2.39
	Self employed	**531**	**2.27**
	Unemployed/housewife/student	**600**	**2.42**
	Total	2000	2.37
Digital transactions help me avail various discounts /offers	**Public Sector/ Government**	**424**	**2.39**
	Private Sector	**445**	**2.26**
	Self employed	531	2.28
	Unemployed/housewife/student	600	2.36
	Total	2000	2.32
Digitalization will lead to overall progress and development of the country	Public Sector/ Government	424	2.43
	Private Sector	445	2.40
	Self employed	**531**	**2.38**
	Unemployed/housewife/student	**600**	**2.49**
	Total	2000	2.4295

Source: Field survey

The following observations can be made from Table 3.8:

i. Public sector/Government employees are more agreeable to the statement that "Digital banking is meant for tech savvy people" whereas unemployed/housewives /students are least agreeable to this statement.

ii. Public sector/Government employees are more agreeable to the statement that "Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking" whereas self employed people are least agreeable to this statement.

iii. Housewives/students/unemployed people are more agreeable to the statement that "Cashless transactions are a more secure way of transacting" and respondents who are self employed are least agreeable to this statement.

iv. Respondents working in the private sector are more agreeable to the statement that "Banks should discourage branch visits to encourage digital transactions" whereas respondents who are self employed are least agreeable to this statement.

v. Housewives/students/unemployed people are more agreeable to the statement that "I would feel comfortable doing cashless transactions" whereas respondents who are self employed are least agreeable to this statement.

vi. Public sector/Government employees are more agreeable to the statement that "Digital transactions help me avail various discounts /offers" whereas respondents working in the private sector are least agreeable to this statement.

vii. Housewives/students/unemployed people are more agreeable to the statement that "Digitalization will lead to overall progress and development of the country" whereas respondents who are self employed are least agreeable to this statement.

From the above points it can be concluded that Public sector /Government employees feel that digitalization is meant for tech savvy people, they also feel that it is very convenient and helps avail various offers and discounts. Housewives/students/unemployed respondents opine that it is a secure way of transacting and they also feel comfortable doing digital transactions and it will lead to the overall progress and development of the country.

However self employed people do not feel that it is convenient or very safe way of transacting. They also do not feel that digitalization will lead to overall progress and development of the country. Hence promoters of digitalization need to focus on building the trust and confidence of self employed and professionals towards digitalization and cashless banking.

CHAPTER 4

KEY PERSONS IN A FAMILY WHO CONDUCTS DIGITAL TRANSACTIONS

This chapter provides a brief background on how family members influences customer behaviour. It identifies the key person in the family who is Phone/Tech savvy and who normally conducts digital trasactions. This information is then further classified on the basis of urban and rural respondents .

4.1 Background

Family role structure decisions is an important component in the study of customer behaviour. It denoted the way how different members of the family influences the decision to do something in a particular manner. According to Filiatrault and Ritchie (1980), family role structure decision describes the manner in which influence across elements of the decision making process is distributed among members of a decision making unit. In any society identified there are different types of families like nuclear family, joint family, extended family and the like. Various members taken together comprises a family like husband, wife, children, elderly persons and the like.

Policy makers and marketers in the context of digitalisation are essentially required to identify the key persons who conducts digital transactions because they are the target for advertisements and market communication. In fact communications and instructions have to be done in such a way that it reached the target audience in a very clear and unambiguous manner. Accordingly the fourth objective for this research study has been formulated as;

To identifying key persons in a family who conducts digital transactions.

With the background information as cited above, an effort is made to know and identify the key persons in a family who conducts digital transactions.

4.2 Identification of the key person in the family who conducts digital transactions:

To identify the key person in the family who conduct digital transactions respondents were asked to name the person in the family who is phone/tech savvy and who normally conducts digital transactions or makes online purchases.

The findings with respect to the same have been presented below:

Table 4. 1: Person in the family who is Phone/Tech savvy

Person	Frequency	Percent
Husband	378	18.9
Wife	178	8.9
Children	563	28.2
Elderly persons	347	17.4
Any other	336	16.8
None	198	9.9
Total	2000	100.0

Source: Field survey

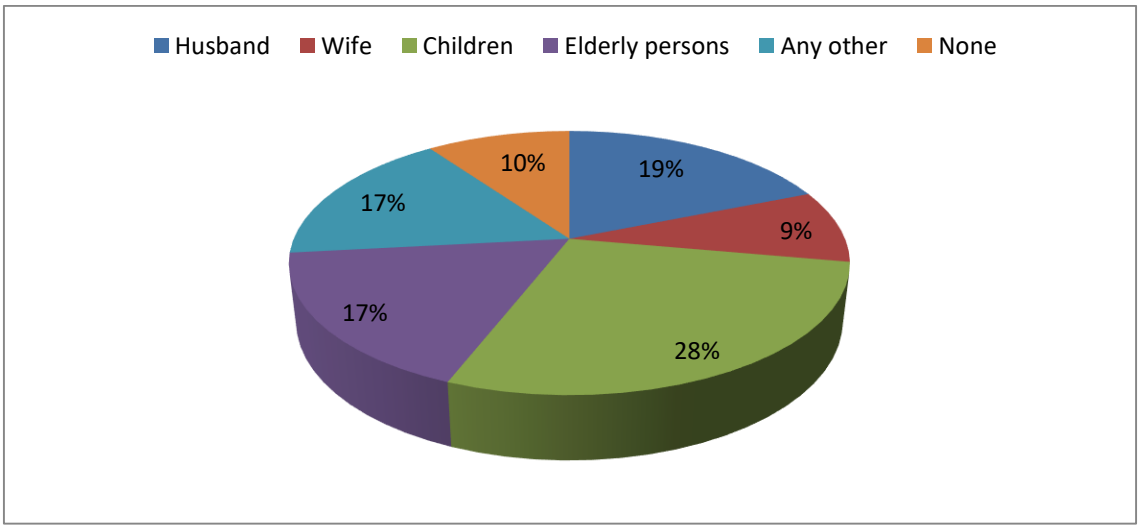

Figure 4.1: Opinion on who in the family is Phone/Tech Savvy (Percentage of responses)

Source: Field survey

From Table 4.1 and Figure 4.1 it can easily be identified that majority of the respondents opine that their children are the ones in the family who are the most Phone/ Tech savvy. Wives are found to be the least Phone/ Tech savvy in the family. It is also interesting to observe that 10% of the respondents have opined that nobody in the family is Phone/Tech savvy.

Table 4.2 and Figure 4.2 , presents the opinion of the respondents on, who in the family normally conducts digital transactions or makes online purchases. The responses are very similar to the response on the previous question.

Table 4.2: Person in the family who normally conducts digital transactions

	Frequency	**Percent**
Husband	295	14.8
Wife	218	10.9
Children	586	29.3
Elderly persons	298	14.9
Any other	370	18.5
None	233	11.7
Total	**2000**	**100.0**

Source: Field survey

In this case also we observe that the respondents opine that it is mostly the children in the family who conduct digital transactions or make online purchases. Wives are again identified as the ones who normally do not conduct digital transactions or make online purchases. Here also it is seen that 11.7 percent of the respondents have said that no one in the family conducts digital transactions or makes online purchases.

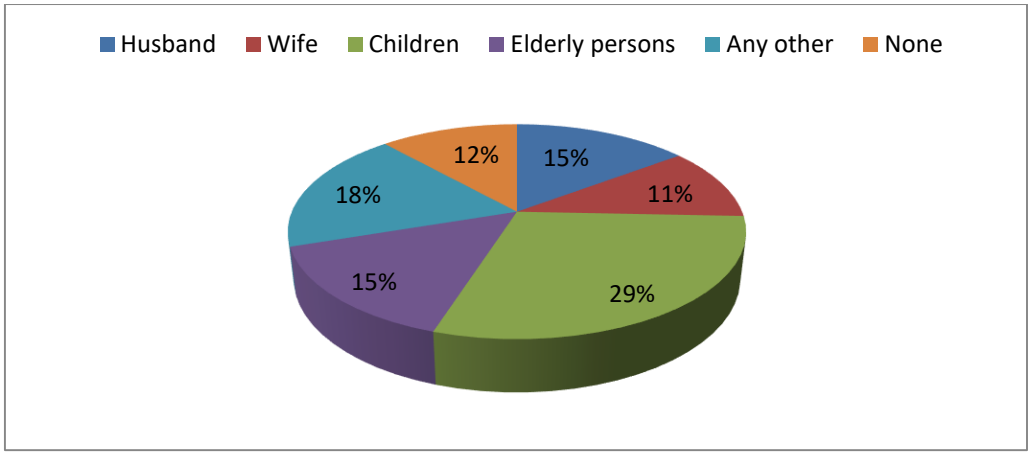

Figure 4.2: Opinion on who in the family normally conducts digital transactions or makes online purchases (Percentage of responses)

Source: Field survey

4.2.1: Association of response on person in the family who is Phone / Tech savvy with respect to location

The researchers were interested to know if the respondents from urban and rural locations gave similar responses to both the questions above. To find out the association of the response on person in the family who is Phone/Tech savvy with the location of the respondent a Pearson's Chi Square test was conducted and cross tabulation of relevant data was done.

The following null hypothesis was formulated and tested:

H_{05}= There is no significant relationship between the responses given by respondents residing in Urban and Rural locations on the key person in the family who is Phone/ Tech savvy at 95% confidence level.

The results of the Pearson's Chi square test between location and the response on the key person in the family who is Phone/ Tech savvy shown in Table 4.3.

Table 4.3: Chi-Square Tests to investigate relationship between location and response on key person in the family who is Phone/Tech savvy

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.719[a]	5	.000

Source: Field survey

Table 4.3, indicates a statistically significant relationship between location and the response on the key person in the family who is Phone/ Tech savvy as $p < 0.05$. Hence a cross tabulation was done and the findings are presented in Table 4.4

From Table 4.4 it is seen that majority of the respondents in the Rural areas have said that children are the most Phone/Tech savvy person in the family whereas majority of the respondents in the Urban areas have said that husbands are the most tech savvy person in the family.

Table 4.4: Cross Tabulation of Person in the family who is Phone/Tech savvy with respect to location

Person in the family who is Phone/Tech savvy		Location		Total
		Rural	Urban	
Husband	Count	286	92	378
	% within Location	17.7%	**24.0%**	18.9%
Wife	Count	137	41	178
	% within Location	8.5%	10.7%	8.9%
Children	Count	486	77	563
	% within Location	**30.1%**	20.1%	28.2%
Elderly persons	Count	272	75	347
	% within Location	16.8%	19.5%	17.4%
Any other	Count	266	70	336
	% within Location	16.5%	18.2%	16.8%
None	Count	169	29	198
	% within Location	10.5%	7.6%	9.9%
Total	Count	1616	384	2000
	% within Location	100.0%	100.0%	100.0%

Source: Field survey

4.2.2 Association of response on person in the family who is conducts digital transactions or makes online purchases with respect to location

Similarly, the following null hypothesis was also framed and tested:

H_{06}= There is no significant relationship between the responses given by respondents residing in Urban and Rural locations on the key person in the family who conducts digital transactions or makes online purchases at 95% confidence level.

The results of the Pearson's Chi square test between location and the response on the key person in the family who conducts digital transactions or makes online purchases is shown in Table 4.. In this case also a statistically significant relationship was observed between location and the response on the key person in the family who conducts digital transactions or makes online purchases as $p< 0.05$. Again a cross tabulation was done and the findings are presented in Table 1.14.

Table 4.5: Chi-Square Tests to investigate relationship between location and response on key person in the family who conducts digital transactions

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.886[a]	5	.000

Source: Field survey

Table 4.6: Cross Tabulation of Person in the family who conducts digital transactions with respect to location

		Location		
		Rural	Urban	Total
Husband	Count	234	61	295
	% within Location	14.5%	15.9%	14.8%
Wife	Count	168	50	218
	% within Location	10.4%	13.0%	10.9%
Children	Count	490	96	586
	% within Location	**30.3%**	**25.0%**	**29.3%**
Elderly persons	Count	234	64	298
	% within Location	14.5%	16.7%	14.9%
Any other	Count	281	89	370
	% within Location	17.4%	23.2%	18.5%
None	Count	209	24	233
	% within Location	12.9%	6.3%	11.7%
Total	Count	1616	384	2000
	% within Location	100.0%	100.0%	100.0%

Source: Field survey

Again from Table 4.6 it is seen that majority of the respondents in the Rural areas as well as the Urban areas have said that children are the ones who mostly conduct digital transactions or makes online purchases.

CHAPTER 5

BARRIERS IN INCULCATING A CULTURE OF DIGITAL AND CASHLESS BANKING

This chapter focusses on the barriers impending the development of a culture of digital and cashless transactions. It identifies wether location and demographics have an effect on the perceptions towards the factors that hinder the development of a culture of digital and cashless transactions.

5.1 Background

Barrier basically is a hindrance or obstacle that prevents movement or access. In other other words, it is an obstruction that keeps people or things away from something. Often innovative products are introduced in the market for the customers to consume them. The way they are accepted by the target audience in a short span of time is often known as diffussion of innovation. Innovations add to the upliftment of lifestyle and standard of living.

Barriers may present in the process of digitalisation in many way. One may be what is known as perceptual barriers that exist because of biasness developed due to lack of information or misinformation. Another barrier may be due to inherent inherent defects in the digital products because of which it restricts the free usability of the product and others. It is the task of policy makers to identify the barriers and remove them so that the products are used to the benefit of the consumers. Accordingly the third objective for this research study has been formulated as;

To identifying the impending barriers in inculcating a culture of digital and cashless banking.

With the background information as cited above, an effort is made to identifying the impending barriers in inculcating a culture of digital and cashless banking.

5.2 Analysis of the perceived barrier to digitalization and cashless transactions:

This section makes an attempt to identify the most agreed perception about barriers to digitalization and cashless transactions among the respondents. The frequencies of the respondent's agreement/disagreement to certain pre-identified statements were analysed for this purpose. A score of 1 indicated disagreement, 2 neither agreement nor disagreement and a score of 3 indicated agreement to the statements. The mean of the responses were computed to find out the most agreeable perception about barriers to digitalization and cashless transactions. It has been computed in the following manner:

Weighted Average of:

Electricity and Internet connectivity issues are involved = (1*189+2*693+3*1118)/2000= 2.46

Likewise the weighted mean has been calculated for the other statements. The statements have been presented in the descending order of their means in Table 5.1. The frequencies (count of responses) in each category of the statements have been presented in Figure: 5.1.

Table 5. 1: Common Barriers to Digitalization

Common barriers	Disagree	Neither agree nor disagree	Agree	Mean
Electricity and Internet connectivity issues are involved	189	693	1118	2.46
People are not aware of all the digital products which are available and its usage	199	755	1046	2.42
In digital transactions, there is perceived risk of fraud	270	904	826	2.28
Impending barriers retard the growth and progress of overall digitalization of the country.	240	979	781	2.27
A culture of digital and cashless banking is missing	310	845	845	2.27
It is a technical subject and beyond the comprehension of common masses	353	770	877	2.26
There is a risk of committing errors and losing money	381	766	853	2.24
The processes involved in conducting digital transactions are not easy to understand	424	921	655	2.12
Digital transactions are very complicated and full of hassles	540	800	660	2.06

Source: Field survey

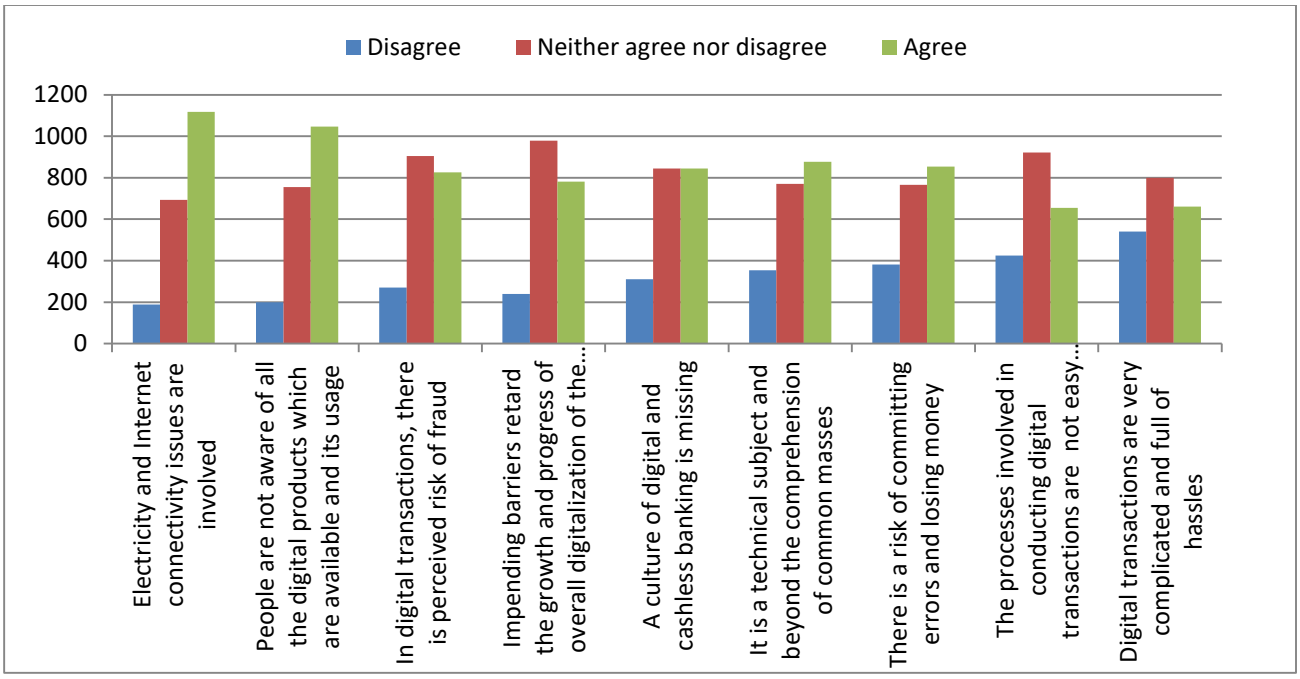

Figure 5. 1: Count of the responses related to perception on barriers to digitalization and cashless transactions

Source: Field survey

From the Table 5.1 and Figure 5.1 it is observed that respondents perceive electricity and internet connectivity issues as barriers to digitalization and cashless transactions(Highest Mean=2.46; Highest count on "Agree"=1118). Also they perceive that people are not aware of all the digital products which are available and its usage (Second Highest Mean=2.42; Second Highest count on "Agree"=1046).

Also it is observed that respondents do not perceive digital transactions to be very complicated and full of hassles as a barrier to digitalization and cashless transactions (Lowest Mean=2.06; Lowest count on "Agree"=660)

5.2.1 Effect of location on perception towards barriers to digitalization and cashless transactions:

To examine whether there exists any significant differences in the perception of respondents towards the barriers to digitalization and cashless transactions on the basis of urban and rural locations an Independent sample 't' test was conducted at a significance level of 5% (α=0.05).

The different perceptions on the barriers are taken as the test variables (dependent variable) while the respondents' place of residence is taken as the grouping variable (independent variable).

Hence the following hypothesis was framed and tested:

H_{O7}: There is no significant difference in the perception towards barriers to digitalization and cashless transactions on the basis of respondents residing in urban and rural location at 95% confidence level.

The results of the t test as shown in Table 5.2 indicate that the null hypothesis, that there is no significant differences in the means of the perception (p=0.02) with respect to the place of residence of the respondents is as rejected (p-value is less than $\alpha = 0.05$ in all cases). This indicates that the above mentioned perceptions on the barriers to digitalization and cashless transactions vary significantly with respect to the place of residence of the respondents.

Table 5.2: Perception towards barriers to digitalization and cashless transactions w.r.t location

Perception towards barriers to digitalization and cashless transactions	Location	N	Mean	SD	t	df	Sig. (2-tailed)
Digital transactions are very complicated and full of hassles	Rural	1616	2.11	0.77	5.63	1998.00	**0.00**
	Urban	384	1.86	0.76			
In digital transactions, there is perceived risk of fraud	Rural	1616	2.30	0.68	2.88	1998.00	**0.00**
	Urban	384	2.19	0.72			
A culture of digital and cashless banking is missing	Rural	1616	2.32	0.69	6.34	1998.00	**0.00**
	Urban	384	2.06	0.75			
People are not aware of all the digital products which are available and its usage	Rural	1616	2.46	0.66	5.29	1998.00	**0.00**
	Urban	384	2.26	0.68			
There is a risk of committing errors and losing money	Rural	1616	2.26	0.75	2.49	582.89*	**0.01**
	Urban	384	2.15	0.74			
The processes involved in conducting digital transactions are not easy to understand	Rural	1616	2.14	0.72	3.72	1998.00	**0.00**
	Urban	384	1.99	0.73			
It is a technical subject and beyond the comprehension of common masses	Rural	1616	2.29	0.74	3.30	582.77*	**0.00**
	Urban	384	2.15	0.73			
Electricity and Internet connectivity issues are involved	Rural	1616	2.48	0.66	2.26	1998.00	**0.02**
	Urban	384	2.40	0.69			
Impending barriers retard the growth and progress of overall digitalization of the country.	Rural	1616	2.28	0.66	0.92	568.81*	0.36
	Urban	384	2.24	0.67			

*The t and df were adjusted because variance were not equal.

Source: Field survey

From descriptive statistics we can observe that respondents in the rural areas are more agreeable to all the statements pre identified by the researchers as barriers to digitalization and cashless transactions.

However we notice that the difference in the mean is not significant with respect to place of residence on the perception that impending barriers retard the growth and progress of overall digitalization of the country (p=0.36).

5.2.2 Effect of demographic factors on the perception towards digitalization and cashless transactions:

To examine whether there exists any significant differences in the perception on barriers to digitalization and cashless transactions on the basis of select demographic variables a One way ANOVA was conducted at a significance level of 5% (α=0.05). The dependent variables for the study are the perceptions on impending barriers to digitalization and cashless transactions. These dependent variables are 1) Digital transactions are very complicated and full of hassles 2) In digital transactions, there is perceived risk of fraud 3) A culture of digital and cashless banking is missing 4) People are not aware of all the digital products which are available and its usage 5) There is a risk of committing errors and losing money 6) The processes involved in conducting digital transactions are not easy to understand 7) It is a technical subject and beyond the comprehension of common masses 8) Electricity and Internet connectivity issues are involved and 9) Impending barriers retard the growth and progress of overall digitalization of the country. The independent variables considered are age, education, income and occupation.

a. Effect of age group:

The following hypothesis was framed and tested:

Ho_8: There is no significant difference in the perception on the impending barriers to digitalization and cashless transactions on the basis of the age group of the respondents at 95% confidence level.

A statistically significant difference was not found among the six age groups on the perception that in digital transactions, there is perceived risk of fraud $F(5,1994)=2.12$, $p=0.06$,A culture of digital and cashless banking is missing $F(5,1994)=2.12$, $p=0.06$, people are not aware of all the digital products which are available and its usage $F(5,1994)=1.85$, $p=0.10$,there is a risk of committing errors and losing money $F(5,1994)=1.63$, $p=0.15$and that electricity and internet connectivity issues are involved $F(5,1994)=0.23$,$p=0.95$.

For all the other perceptions on impending barriers to digitalization and cashless transactions viz, digital transactions are very complicated and full of hassles, $F(5,1994)=14.62$, $p=0.00$, the processes involved in conducting digital transactions are not easy to understand $F(5,1994)=9.72$, $p=0.00$, it is a technical subject and beyond the comprehension of common masses $F(5,1994)=4.50$, $p=0.00$ and that impending barriers retard the growth and progress of overall digitalization of the country $F(5,1994)= 3.21$,$p=0.01$, the differences in the means was found to be statistically significant($p<0.05$).Hence the null hypothesis is rejected and the alternate hypothesis , that there exist significant difference in the perception towards the impending barriers to digitalization and cashless transactions with respect to age group of the respondents , is accepted.

Table 5.3 presents the descriptive statistics for the significant differences in the above means of the perception of the respondents on the impending barriers to digitalization and cashless transactions with respect to age group.

From Table 5.3 the following observations can be made:

i. Respondents in the age group of above 60 are most agreeable to the statement that digital transactions are very complicated and full of hassels and respondents in the age group of 18-25 are least agreeable to this statement.
ii. Respondents in the age group of 36-45 are most agreeable to the statement that the processes involved in conducting digital transactions are not easy to understand and respondents in the age group of 18-25 are least agreeable to this statement.
iii. Respondents in the age group of above 60 are most agreeable to the statement that it is a technical subject and beyond the comprehension of common masses and respondents in the age group of 18-25 are least agreeable to this statement.
iv. Respondents in the age group of above 60 are most agreeable to the statement that impending barriers retard the growth and progress of overall digitalization of the country and respondents in the age group of 36-45 are least agreeable to this statement.

Table 5.3: Descriptive Statistics for significant difference in the mean, of the perception on digitalization and cashless banking with respect to age group

Perception on the impending barriers to digitalization and cashless banking with respect to profession.		N	Mean
Digital transactions are very complicated and full of hassles	18-25 years	702	1.87
	26-35 years	468	2.10
	36-45 years	390	2.18
	46-55 years	255	2.18
	56-60 years	129	2.22
	Above 60 years	56	2.30
	Total	2000	2.06
The processes involved in conducting digital transactions are not easy to understand	18-25 years	702	1.97
	26-35 years	468	2.15
	36-45 years	390	2.24
	46-55 years	255	2.20
	56-60 years	129	2.19
	Above 60 years	56	2.25
	Total	2000	2.12
It is a technical subject and beyond the comprehension of common masses	18-25 years	702	2.17
	26-35 years	468	2.25
	36-45 years	390	2.34
	46-55 years	255	2.35
	56-60 years	129	2.36
	Above 60 years	56	2.38
	Total	2000	2.26
Impending barriers retard the growth and progress of overall digitalization of the country.	18-25 years	702	2.28
	26-35 years	468	2.30
	36-45 years	390	2.19
	46-55 years	255	2.24
	56-60 years	129	2.27
	Above 60 years	56	2.54
	Total	2000	2.27

Source: Field survey

b. Effect of Education:

The following hypothesis was framed and tested:

Ho_9: There is no significant difference in the perception on the impending barriers to digitalization and cashless transactions on the basis of the education of the respondents at 95% confidence level.

A statistically significant difference was not found among the six educations on the perception that in digital transactions, there is perceived risk of fraud $F(3,1996)=1.27$, $p=0.28$, people are not aware of all the digital products which are available and its usage $F(3,1996)=2.62$, $p=0.06$, there is a risk of committing errors and losing money $F(3,1996)=1.19$, $p=0.31$, electricity and

internet connectivity issues are involved F(3,1996)=0.09,p=0.96 and that impending barriers retard the growth and progress of overall digitalization of the country F(3,1996)= 0.95 ,p=0.42.

For all the other perceptions on impending barriers to digitalization and cashless transactions viz, digital transactions are very complicated and full of hassles F (3,1996)=11.90, p=0.00, a culture of digital and cashless banking is missing F(3,1996)=6.06, p=0.00, the processes involved in conducting digital transactions are not easy to understand F(3,1996)=25.48, p=0.00 and that it is a technical subject and beyond the comprehension of common masses F(3,1996)=6.79, p=0.00, the differences in the means was found to be statistically significant($p<0.05$).Hence the null hypothesis is rejected and the alternate hypothesis , that there exist significant difference in the perception towards the impending barriers to digitalization and cashless transactions with respect to education of the respondents , is accepted.

Table 5.4 presents the descriptive statistics for the significant differences in the above means of the perception of the respondents on the impending barriers to digitalization and cashless transactions with respect to education.

Table 5. 4: Descriptive Statistics for significant difference in the mean, of the perception on digitalization and cashless banking with respect to education

Perception on the impending barriers to digitalization and cashless banking with respect to education		N	Mean
Digital transactions are very complicated and full of hassles	Primary /uneducated	146	2.33
	HSLC / HSSLC	437	2.15
	Graduate	1011	2.03
	Postgraduate and above	406	1.93
	Total	2000	2.06
A culture of digital and cashless banking is missing	Primary /uneducated	146	2.13
	HSLC / HSSLC	437	2.18
	Graduate	1011	2.32
	Postgraduate and above	406	2.28
	Total	2000	2.27
The processes involved in conducting digital transactions are not easy to understand	Primary /uneducated	146	2.28
	HSLC / HSSLC	437	2.33
	Graduate	1011	2.07
	Postgraduate and above	406	1.94
	Total	2000	2.12
It is a technical subject and beyond the comprehension of common masses	Primary /uneducated	146	2.45
	HSLC / HSSLC	437	2.34
	Graduate	1011	2.23
	Postgraduate and above	406	2.18
	Total	2000	2.26

Source: Field survey

From Table 5.4 the following observations can be made:

i. Respondents who are uneducated or have primary education are most agreeable to the statement that digital transactions are very complicated and full of hassels and respondents who are post graduates and above, are least agreeable to this statement.
ii. Respondents who are graduates are most agreeable to the statement that A culture of digital and cashless banking is missing and respondents who are uneducated or have primary education are least agreeable to this statement.
iii. Respondents who are have completed HSLC/HSSLC are most agreeable to the statement that the processes involved in conducting digital transactions are not easy to understand and respondents who are postgraduates and above are least agreeable to this statement.
iv. Respondents who are uneducated or have primary education are most agreeable to the statement that it is a technical subject and beyond the comprehension of common masses and respondents who are postgraduates and above are least agreeable to this statement.

c. Effect of Income:

The following hypothesis was framed and tested:

Ho_{10}: There is no significant difference in the perception on the impending barriers to digitalization and cashless transactions on the basis of the income level of the respondents at 95% confidence level.

A statistically significant difference was not found among the four income levels on the perception that in digital transactions, there is perceived risk of fraud $F(3,1996)=0.54$, $p=0.66$, a culture of digital and cashless banking is missing $F(3,1996)=2.21$, $p=0.09$, there is a risk of committing errors and losing money $F(3,1996)=0.56$, $p=0.64$, it is a technical subject and beyond the comprehension of common masses $F(3,1996)=0.86$, $p=0.46$ and that electricity and internet connectivity issues are involved $F(3,1996)=1.21$, $p=0.31$.

For all the other perceptions on impending barriers to digitalization and cashless transactions viz, digital transactions are very complicated and full of hassles, $F(3,1996)=5.56$, $p=0.00$, people are not aware of all the digital products which are available and its usage $F(3,1996)=5.67$, $p=0.00$, the processes involved in conducting digital transactions are not easy to understand $F(3,1996)=2.66$, $p=0.04$ impending barriers retard the growth and progress of overall digitalization of the country $F(3,1996)= 7.26$,$p=0.00$ the differences in the means was found to be statistically significant($p<0.05$).Hence the null hypothesis is rejected and the alternate

hypothesis , that there exist significant difference in the perception towards the impending barriers to digitalization and cashless transactions with respect to income level of the respondents , is accepted.

Table 5.5 presents the descriptive statistics for the significant differences in the above means of the perception of the respondents on the impending barriers to digitalization and cashless transactions with respect to income level.

Table 5. 5: Descriptive Statistics for significant difference in the mean, of the perception on digitalization and cashless banking with respect to income

Perception on the impending barriers to digitalization and cashless banking with respect to income		N	Mean
Digital transactions are very complicated and full of hassles	Less than 50000	720	2.00
	50001-1 lakhs	115	2.16
	above 1 lakh -5 lakhs	904	2.12
	Above 5 lakhs	261	1.96
	Total	2000	2.06
People are not aware of all the digital products which are available and its usage	Less than 50000	720	2.50
	50001-1 lakhs	115	2.29
	above 1 lakh -5 lakhs	904	2.38
	Above 5 lakhs	261	2.42
	Total	2000	2.42
The processes involved in conducting digital transactions are not easy to understand	Less than 50000	720	2.09
	50001-1 lakhs	115	2.16
	above 1 lakh -5 lakhs	904	2.16
	Above 5 lakhs	261	2.03
	Total	2000	2.12
Impending barriers retard the growth and progress of overall digitalization of the country.	Less than 50000	720	2.31
	50001-1 lakhs	115	2.23
	above 1 lakh -5 lakhs	904	2.20
	Above 5 lakhs	261	2.39
	Total	2000	2.27

Source: Field survey

From Table 5.5 the following observations can be made:

v. Respondents with income between 50001-1 lakh are most agreeable to the statement that digital transactions are very complicated and full of hassels and respondents above 5 lakhs, are least agreeable to this statement.

vi. Respondents with income less than 50000 are most agreeable to the statement that people are not aware of all the digital products which are available and its usage and respondents with income between 50001-1 lakh are least agreeable to this statement.

vii. Respondents with income between 50001 to 5 lakhs are most agreeable to the statement that the processes involved in conducting digital transactions are not easy to understand and respondents with income above 5 lakhs are least agreeable to this statement.

viii. Respondents with income above 5 lakhs are most agreeable to the statement that it is a technical subject and beyond the comprehension of common masses and respondents with income between 1 lakh to 5 lakhs are least agreeable to this statement

d. Effect of profession:

The following hypothesis was framed and tested:

Ho_{12}: There is no significant difference in the perception on the impending barriers to digitalization and cashless transactions on the basis of the profession of the respondents at 95% confidence level.

A statistically significant difference was not found among the fourprofessions on the perception that in digital transactions, there is perceived risk of fraud $F(3,1996)=2.12$, $p=0.10$, a culture of digital and cashless banking is missing $F(3,1996)=1.07$, $p=0.36$,people are not aware of all the digital products which are available and its usage $F(3,1996)=0.41$, $p=0.75$, there is a risk of committing errors and losing money $F(3,1996)=1.72$, $p=0.16$, electricity and internet connectivity issues are involved $F(3,1996)=0.20$,$p=0.90$ and that impending barriers retard the growth and progress of overall digitalization of the country $F(3,1996)= 0.45$,$p=0.72$.

For all the other perceptions on impending barriers to digitalization and cashless transactions viz, digital transactions are very complicated and full of hassles, $F(3,1996)=11.84$, $p=0.00$, the processes involved in conducting digital transactions are not easy to understand $F(3,1996)=4.64$, $p=0.00$ and that it is a technical subject and beyond the comprehension of common masses $F(3,1996)=3.57$, $p=0.01$, the differences in the means was found to be statistically significant($p<0.05$).Hence the null hypothesis is rejected and the alternate hypothesis , that there exist significant difference in the perception towards the impending barriers to digitalization and cashless transactions with respect to education of the respondents , is accepted.

Table 5.6 presents the descriptive statistics for the significant differences in the above means of the perception of the respondents on the impending barriers to digitalization and cashless transactions with respect to profession.

From Table 5.6 the following observations can be made:

i. Respondents who are unemployed/housewives/students are most agreeable to the statement that digital transactions are very complicated and full of hassels and respondents who are self employed are least agreeable to this statement.

ii. Respondents who are self employed are most agreeable to the statement that the processes involved in conducting digital transactions are not easy to understand and respondents who are unemployed/housewives/students are least agreeable to this statement.

iii. Public sector / government employees are most agreeable to the statement that it is a technical subject and beyond the comprehension of common masses and respondents who are unemployed/housewives/students are least agreeable to this statement.

Table 5. 6: Descriptive Statistics for significant difference in the mean, of the perception on digitalization and cashless banking with respect to profession

Perception on the impending barriers to digitalization and cashless banking with respect to profession		N	Mean
Digital transactions are very complicated and full of hassles	Public Sector/ Government	424	2.11
	Private Sector	445	2.13
	Self employed	531	2.14
	Unemployed/housewife/student	600	1.91
	Total	2000	2.06
The processes involved in conducting digital transactions are not easy to understand	Public Sector/ Government	424	2.16
	Private Sector	445	2.13
	Self employed	531	2.17
	Unemployed/housewife/student	600	2.03
	Total	2000	2.12
It is a technical subject and beyond the comprehension of common masses	Public Sector/ Government	424	2.32
	Private Sector	445	2.27
	Self employed	531	2.29
	Unemployed/housewife/student	600	2.18
	Total	2000	2.26

Source: Field survey

CHAPTER 6

STATUS OF PENETRATION OF DIGITAL TRANSACTION

6.1 Background

New financial products are getting introduced in the market at an increasing pace day by day. This is further catalysed by the market globalisation process where new products diffuse, get extended and become obsolete. Concept of market penetration which deals with the degree of the usage of the product by the customers in a given market has become quite popular. By knowing the penetration rate, one can know the performance of a product in the market and its degree of acceptability. Penetration rate of different categories of products and services in different geographical regions also helps us for comparison of the performance. Therefore products or services with low penetration rate indicates the opportunity for further marketing of the product among the target population. Andbased upon the performance of the different products one can know what appropriate action is required for promoting the products. Penetration also gives us input on to the aspect like whether there is a need for creating awareness, requirement of further research makes the product more customers friendly, policy issues are involved and additional promotional offers are required. Accordingly the fourth objective for this research study has been formulated as;

To know the present status with respect to penetration of digital transaction in the daily life of the urban/rural masses.

With the background information as cited above, an effort is made to status of penetration of digital transaction in the daily life of urban and rural masses. For assessing market penetration, a simple way of assessing is to select the the customers who are the actual consumers of the producy or service. For instance if information collected from the relevant field says that out of every 20 people living in a well defined target market 5 are suing a product, then the penetration rate is (5/20*100) 25 percent. This indicates that 75 percent are left out of the product and they

are the potential target for communication related to product awareness. Accordingly for knowing the status of penetration of digital transactions, various digital facilities for availing digital banking services, various modes of availing banking services, various types of digital transactions and awareness cum status of use of various digital transactions have been considered.

6.2 Penetration of different digital facilities / products

To know the status of penetration of digital facilities / products that facilitates the conduct of digital transactions, different digital facilities / products have been considered. They are the possession of (i) *Jan Dhan Account*, (ii) *Savings Bank Account*, (iii) *Adhaar Card* and (iv) *Mobile Phone* (that includes both *Feature Phone* and *Android Phone*). Respondents were asked whether they possess the facilities. The answer of each respondent were recorded either in *yes* or *no* form. Detailed findings of the field work conducted are discussed below as per Table 6.1: *Penetration of Facilities / Products (in percentage*); Details of the Overall Penetration of Facilities / Products for Digital Transactions is also given in the form of a *Bar Diagram* as per Figure 6.1: Further details of the rural urban breakup of penetration of facilities / products for digital transactions is also given in the form of a *Bar Diagram* as per Figure 6.2.

Table 6. 1: Penetration of facilities / products (in %)

FACILITIES / PRODUCTS	*OVERALL*	*RURAL*	*URBAN*
Jan Dhan Account	28.20	25.60	26.60
Savings Bank Account	90.50	90.80	89.60
Adhaar Card	76.00	73.60	85.90
Mobile Phone	94.40	93.90	96.40
Feature Phone	16.10	15.40	17.50
Android Phone	83.90	84.60	82.50

6.2.1 Jan Dhan Account:

The findings of the field work reveals that the percentage of people having Jan Dhan Account is 28.20 percent (on an overall basis) out of which 25.60 percent is concentrated in the rural areas and 26.60 percent is concentrated in the urban areas. This indicates that there is massive scope for opening Jan Dhan Account. The fact is that the people still are not convinced about the utility

of Jan Dhan Accounts and in majority of the cases it is regarded as the poor man's bank account. Some of the respondents show a frown face the moment they are asked about Jan Dhan Account. May be there is some misconception associated with such account.

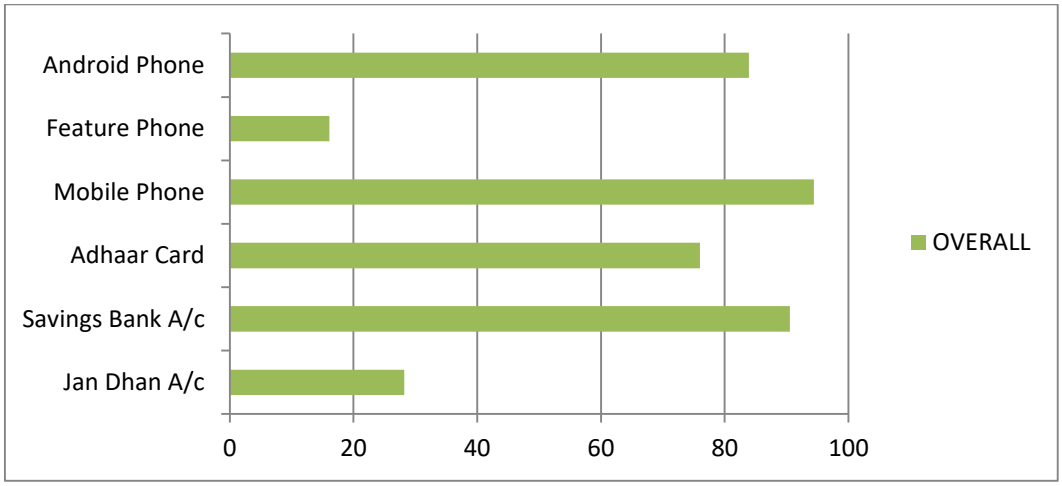

Figure 6.1: Bar diagram of overall penetration of digital facilities / products

6.2.2 Savings Bank Account:

It has been found that the percentage of people having Savings Bank Account is 90.50 percent (on an overall basis) out of which 90.80 percent is concentrated in the rural areas and 89.60 percent is concentrated in the urban areas. The high penetration of savings bank account is an indication that opening of such account is quite popular. At the same time feedback of the people indicates that it is the basis entry for conducting safe and secured banking transactions. Further people are of the opinion that such account enables to availing various banking benefits and offers associated with the accounts.

6.2.3 Adhaar Card:

With regard to possession of Adhaar Card holders, the percentage is 76 percent (on an overall basis) out of which 73.60 percent is concentrated in the rural areas and 85.90 percent is concentrated in the urban areas. In Assam the penetration of Adhaar Card is not 100 percent. This is because requirement of Adhaar Card till now is not compulsory in the north eastern part of the country. But with the process of NRC (National Register of Citizens) Exercise near completion, more awareness has to be created. Till now the process of issuance is still going on. If it is made compulsory with a given deadline for Know Your Customer (KYC) compliance, the

process will speed up. At the same time with the specification of the production Adhaar Cards during various job applications and interviews the need is more felt among the younger population.

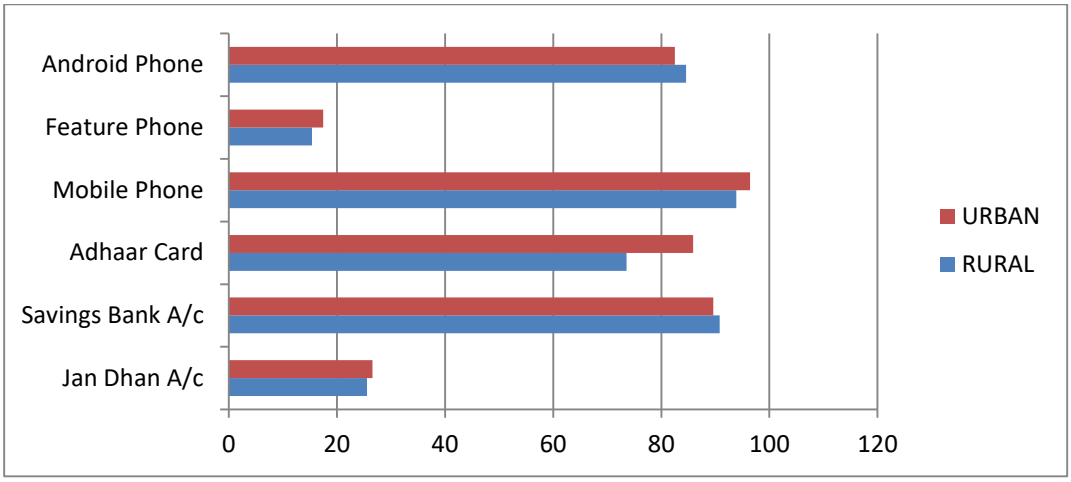

Figure 6.2: Bar diagram of penetration of digital facilities / products (rural urban breakup)

6.2.4 Mobile Phones:

Field work reveals that 94.40 percent of the people possess mobile phones (on an overall basis). In the rural areas, the penetration of mobile phones is 93.90 percent and in the urban areas, the penetration of mobile phones is 96.40 percent. Among the population possessing mobile phones, 83.90 percent are Android Phone owners (out of which rate of penetration is 84.60 percent in the rural areas and 82.50 percent in the urban areas. Further among the mobile phone owners, 16.10 percent possess feature phones (out of which rate of penetration is 15.40 in the rural areas and 17.50 in the urban areas). High penetration of mobile phones is an indication that it is the basic means for communication that is very convenient, movable and popular. At the same time Android Phones are more popular compared to the feature phones as there is convergence of technology because of which multiple facilities cum advantages are present in Android Phone. This indicates that majority of the people do have the tool to avail or conduct digital transactions. It has been found that in the rural areas the penetration of Android Phones is slightly higher compared to the urban areas. This is because of the fact that in the rural areas the population is comparatively higher. Secondly Android phones are used in the rural areas for more unproductive activities including socializing compared to the urban areas.

6.3 Penetration of different modes of banking services

To know the status of penetration of different modes of banking services, 3 different modes of availing banking services has been considered namely, (i) *availing the services by visiting the bank personally*, (ii) *availing the services of banking correspondent / agents* and (iii) *availing banking services by online mode through mobile phone/computers*. Respondents were asked as to whether they avail each of the 3 modes of banking services under consideration. The answer of each respondent were recorded either in *yes* or *no* form. Details of the findings with regard to the penetration of banking services are given below as per Table *6.2*. The overall picture of penetration of banking services is represented graphically by bar diagram as per Figure 6.3. Further details of rural urban breakup of penetration of banking services are represented graphically by bar diagram as per Figure 6.4.

Table 6. 2: Penetration of modes of banking services (in %)

DIFFERENT MODES	*OVERALL*	*RURAL*	*URBAN*
Visiting the bank personally	84.4	82.1	94.1
Services of banking correspondent / agents	29.8	28.5	35.4
Online mode through mobile phone/computers	55.2	52.9	64.8

6.3.1 Visiting bank personally:

Among the modes of availing banking services, the most popular mode as revealed by the field work is by visit to the bank personally. The findings reveals that the percentage of people availing banking services by personally visiting the bank is an overwhelming 84.40 percent (on an overall basis) out of which 82.1 percent is concentrated in the rural areas and 94.10 percent is concentrated in the urban areas.

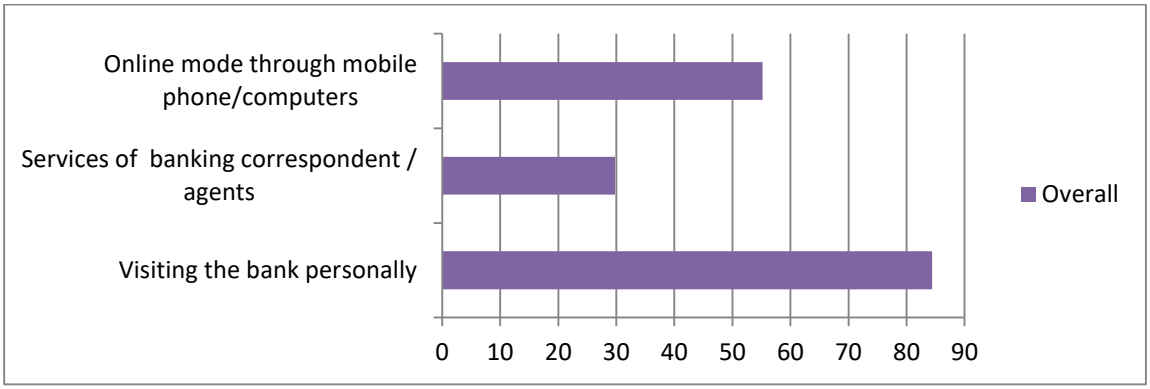

Figure 6.3: Bar diagram of overall penetration of different modes of banking services

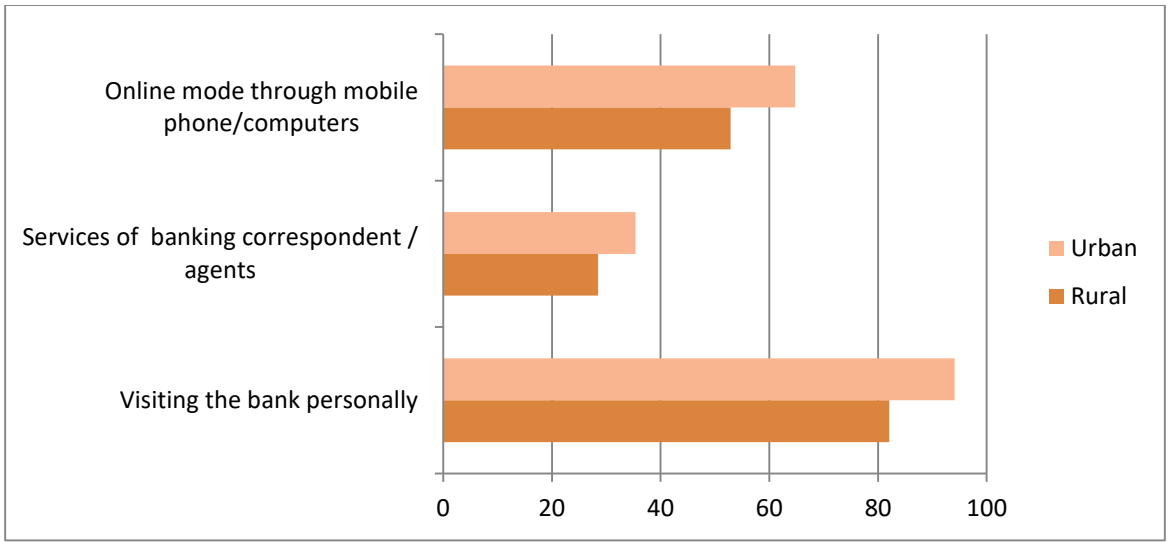

Figure 6.4: Bar diagram of penetration of different modes of banking services (rural urban breakup)

Based upon the demographic profile of the respondents, it has been found that compared to the younger generation, the older generations go for availing banking services by personally visiting the bank. The older generation fears the risk of fraud in digital transactions. They are of the view that during banking transactions digitally, if there is any error committed, no one can be consulted or can be held accountable easily. But by doing transactions at the bank, in case of any problem or error, the risk for the people is comparatively less as bank officials are always there to help and sort out in any contingency. This reflects the fact that culturally the people are still emotionally attached to availing banking services by visit to the bank personally as there is physical and social interaction in such service encounters.

6.3.2 Services of banking correspondent / agents:

The findings of the field work reveals that the percentage of people availing the services of banking correspondent / agents is 29.80 percent (on an overall basis) out of which 28.50 percent is concentrated in the rural areas and 35.40 percent is concentrated in the urban areas. As a matter of fact the services of banking correspondent or agents is an extension of normal banking service and therefore in order to maintain individual USP's (unique selling proposition / service

differentiation), banking organizations provide such service through service agents. Banks in certain pockets deliberately promote extension service in areas where it is not feasible to open a permanent establishment of brick and mortar. This also helps in enhancing the brand image and market share. At the same time, it may be considered as a part of the organizational CSR (corporate social responsibility) activity in inaccessible areas. Further it is convenient for people who are engaged in multiple activities and have no spare time.

6.3.3 Online mode through mobile phone / computers:

It has been found that the percentage of people availing online mode of banking services through mobile phone / computers is 55.20 percent (on an overall basis) out of which 52.90 percent is concentrated in the rural areas and 64.80 percent is concentrated in the urban areas. This reflects that there is a long way to go on an overall basis on the country's path towards total digitalization. At the same time the percentage in the urban areas is more than the rural areas. This is a reflection that urban people are more techno savvy and comfortable with the process of availing banking services through online mode. On field visit, it has been found that it is a matter of status symbol for a segment of urban population to go for banking services through online mode. At the same time it saves a lot of time and cost in availing banking services through online mode. Moreover it is convenient for them as well. Based upon the demographic profile of the respondents, it has been found that compared to the older generation, the younger generations go for more online services. The younger generation is more techno savvy.

6.4 Penetration of different digital transactions in daily life

To know the status of penetration of different type of digital transactions, a list of 9 different transactions that are required to be done in the day to day life have been considered namely (i) *Online payment of Mobile Phone Bill*, (ii) *Online payment of Electricity Bill*, (iii) *Online payment of Property Tax Bill*, (iv) *Booking of LPG Gas online / sms mode*, (v) *Online payment for LPG Gas refilling*, (vi) *Online Net Banking/Mobile Banking*, (vii) *Cashless (Debit Card /Card/Paytm) Payment*, (viii) *Buying goods / services online* and (ix) *Transactions through Cash on Delivery mode*. Respondents were asked as to whether they do the transaction in the day to day life. The answer of each respondent were recorded either in *yes* or *no* form. Details of the findings of penetration of different digital transactions are given as per *TABLE 6.3* below. The

overall picture of penetration of different digital transactions is represented by Bar Diagram in *FIGURE 6.5*. Further the rural urban breakup of penetration of different digital transactions is represented graphically by Bar Diagram in *FIGURE 6.6*.

Table 6.3: Penetration of different digital transactions (in %)

TYPE OF TRANSACTIONS	*OVERALL*	*RURAL*	*URBAN*
Online payment of Mobile Phone Bill	55.70	53.90	63.30
Online payment of Electricity Bill	43.80	41.90	51.80
Online payment of Property Tax Bill	27.80	28.70	24.20
Booking of LPG Gas online / sms mode	48.80	46.30	59.10
Online payment for LPG Gas refilling	35.90	37.30	30.20
Online Net Banking/Mobile Banking	57.90	56.20	65.10
Cashless (Debit Card /Card/Paytm) payment	58.30	56.00	68.00
Buying goods / services online	66.30	63.10	79.90
Transactions through Cash on Delivery mode	70.00	66.50	84.40

6.4.1 Online payment of mobile phone bill:

From the field work, it has been found that with regard to the use of o*nline mode of payment of mobile phone bill*, the overall use of the product is 55.7 percent (out of which 53.9 percent is concentrated in the rural areas and 63.3 percent is concentrated in the urban areas). The percentage of usage in the urban areas is more compared to the rural areas by an additional 10 percent. This indicates that the urban people are more techno savvy and comfortable with the process of making online payment of mobile bills. For them the process is convenient, saves time, user friendly and economical. At the same time if the generation is taken into consideration, the younger generation has a higher percentage in the use of online payment of mobile phone bills. On the other hand, the overall percentage also indicates that there is still scope to increase the overall penetration percentage. There is need for the creation of more awareness and impart knowledge on the way as to how to make payment of mobile phone bill on online mode through the various service provider portals.

6.4.2 Online payment of electricity bill:

It has been revealed by the field work that with regard to the use of o*nline payment of electricity bill*, the overall use of the product is 43.8 percent (out of which 41.9 percent is concentrated in the rural areas and 51.8 percent is concentrated in the urban areas). The overall low penetration rate indicates that there is scope for creation of more awareness among the public both in the

urban and especially in the rural areas for the payment of electricity bills online. Field visit also indicates reported cases of non updation of electricity bills even after payment before due date. There are sometimes generations of erroneous billings. So a segment of the consumers directly go to the designated Electricity Bill Collection Centre for rectification and making payment of electricity bills. Therefore this technical issue has to be sorted out by the ASEB as well.

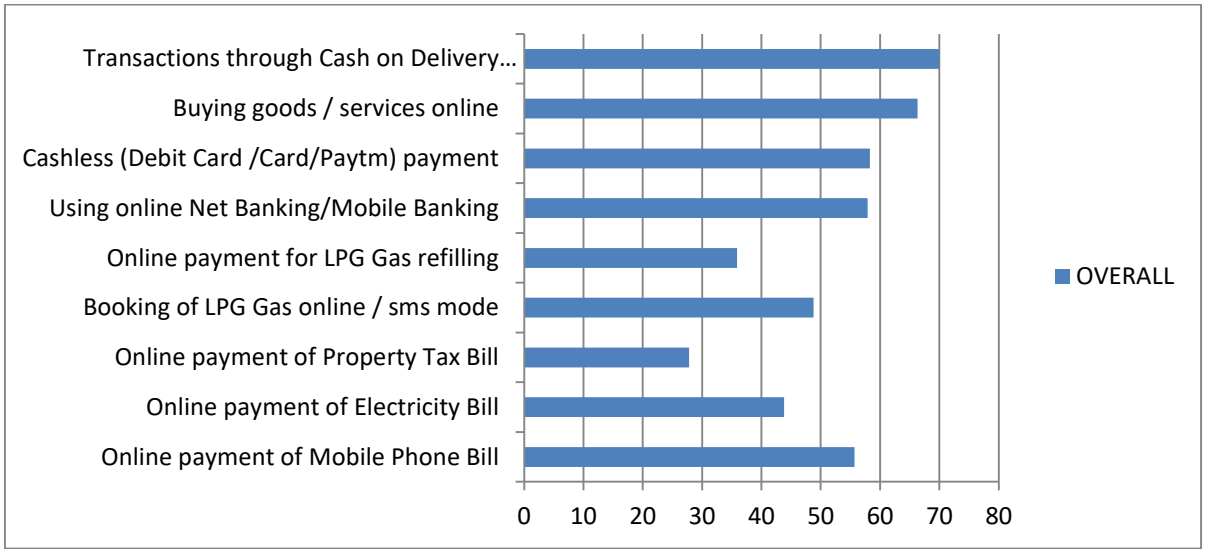

Figure 6. 5: Bar diagram of overall penetration of different digital transactions

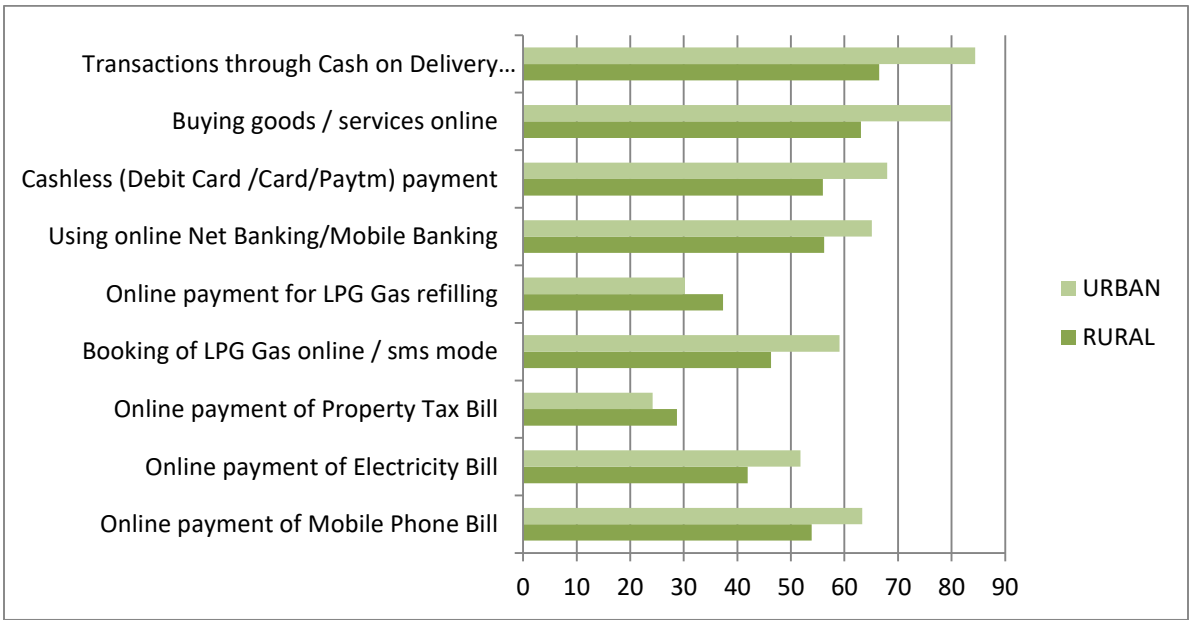

Figure 6.6: Bar diagram of penetration of different digital transactions(rural urban breakup)

6.4.3 Online payment of property tax bill:

With regard to the use of o*nline payment of Property Tax Bill*, the overall use of the product is 27.8 percent (out of which 28.7 percent is concentrated in the rural areas and 24.2 percent is concentrated in the urban areas). There are reports by a small segment of the population that the Mobile Apt does not function properly. At the same time the elderly people (senior people) are rather more comfortable with physical payment of Property Tax Bill as they use this opportunity as a way of socializing by going physically to the Municipality Office for the payment of property tax.

6.4.4 Booking of LPG gas online / sms mode:

With regard to the use of *booking of LPG Gas online / SMS mode*, the overall use of the product is 48.8 percent (out of which 46.3 percent is concentrated in the rural areas and 59.1 percent is concentrated in the urban areas). It has been found from the field visit that a segment of the population deliberately does not go for online LPG Gas booking. This because of the fact the booking service is provided by the LPG Gas Distribution Agency delivery man who provides much customized service even over phone. Since an average percentage of the population is availing LPG Gas booking by online / sms mode is an indication that there is scope for more penetration of this mode of booking through awareness creation campaign.

6.4.5 Online payment for LPG gas refilling:

With regard to the use of o*nline payment for LPG Gas refilling*, the overall use of the product is 35.9 percent (out of which 37.3 percent is concentrated in the rural areas and 30.2 percent is concentrated in the urban areas). As per the findings, the usage rate is less in the urban areas compared to the rural areas. This is because of the fact that a major part of the urban customers are more comfortable with the offline mode. As the urban areas are more engaged in productive activities, they take the help of the cylinder delivery man of the LPG Gas Distributors. The delivery man in fact give personalized in terms of direct home delivery of cylinders as well as the booking job, if so required. People find it as a way to gratify the need of self actualization by giving tips to the delivery man per cylinder. This has engaged the vendor class as a source of livelihood. The government has to adopt such policies to rehabilitate the delivery men dealing with the LPG cylinders. Some corners (in far flung remote areas) have reported the presence of

problem with the Mobile Apt for online payment for LPG refill. There are reports of failure of the transaction in terms of inability to commit at the time of final payment in the last stage due to connectivity problem.

6.4.6 Online net banking/mobile banking:

With regard to the use of online Net Banking /Mobile Banking, the overall use of the product is 57.9 percent (out of which 56.2 percent is concentrated in the rural areas and 65.1 percent is concentrated in the urban areas). Penetration of online Net Banking /Mobile Banking is average. On a comparative basis, it is high in the urban areas compared to the rural areas. The older generation is not tech savvy because of which they are non supportive as well as skeptical on to the proposal of using net banking or mobile banking. Moreover rumours of online frauds and erroneous debits from bank accounts have made them stick to the concept of traditional banking system by personally visiting the bank. There is lot of scope for creating awareness and educate the population on such products.

6.4.7 Cashless (debit card /card/paytm) payment:

With regard to the use of *Cashless (Debit Card /Card/Paytm) payment*, the overall use of the product is 58.3 percent (out of which 56 percent is concentrated in the rural areas and 68 percent is concentrated in the urban areas). Therefore is can be ruled that with regard to use of *Cashless (Debit Card /Card/Paytm) payment*, penetration is average. Field work reveals the same finding on the use of cashless payments by *Debit Card* like the findings in the use of Net Banking / Mobile Banking. Few cases of reported online frauds and erroneous debits from bank accounts is a demotivation for the people in the use of *Cashless (Debit Card /Card/Paytm) payment.* In fact a segment of people are getting converted to the concept of using the concept of traditional banking system by personally visiting the bank. There is lot of scope for creating awareness and educate the population on such products.

6.4.8 Buying goods / services online:

With regard to the use of *buying goods / services online*, the overall use of the product is 66.3 percent (out of which 63.1 percent is concentrated in the rural areas and 79.9 percent is concentrated in the urban areas). At the same time with regard to buying of goods and services online, all categories of goods are not purchased online. For instance lifestyle products,

consumer durables and high involvement product categories are often not purchased online. Often there are reports that during online purchase there is issue with quality and complaints of breakage / pilferage. A segment of the consumers often find the process of return of defective goods full of hassles (return policy). Further there is limited scope of choice in some product categories as reported. Moreover there are reports of hidden cost and inaccurate information as displayed in the e-commerce portals. There are also reports of mismatch of delivery timing as promised. With the increase in online frauds, customers are more comfortable with COD mode. And even if they go for online transaction, they try to see that the value per transaction is low. Payment confirmation is often not given to the customers. Product delivery cost, tax charges and the like are sometimes reported to be not very clear.

6.4.9 Transactions through cash on delivery mode:

With regard to the conduct of transactions through *Cash on Delivery* (COD) mode, the overall figure is 70 percent (out of which 66.5 percent is concentrated in the rural areas and 84.4 percent is concentrated in the urban areas). In comparison to buying good online by cards (prepaid transaction), Cash on Delivery mode is more preferred. Here the advantage is that people do not have to part with money immediately during online orders and they have scope for verifying the product at the time of delivery and before final payment of the bill. At the same time as per feedback from the respondents, a segment is not supportive to the process of online payment and is more comfortable with physical cash payment on delivery of goods. There also persist complaints that products specification does not tally as what was promised in the online sites. As a result in order to avoid the risk, people prefer the COD mode of purchase.

6.5 Awareness and use of different digital products / services

To know the status of awareness and use of various digital products / services a list of 12 different digital products / services that are available as on date have been considered namely, (i) Debit cards/ Micro ATM, (ii) Credit Cards, (iii) Mobile Banking (USSD/ UPI), (iv) NEFT (National Electronic Fund Transfer), (v) RTGS (Real Time Gross Settlement), (vi) ECS (Electronic Clearing System), (vii0 IMPS (Immediate Payment Service), (viii) AEPS (Aadhar Enabled Payment System), (ix) E wallets / Mobile Wallets, (x) Bank Prepaid Cards, (xi) Digishala and (xii) Green Channel / Green Pin.

Table 6. 4 : Status of awareness/use/unawareness of digital products / services

Sl no	PRODUCT	AWARE AND USING IT (IN PERCENTAGE)			AWARE BUT NOT USING IT (IN PERCENTAGE)			UNAWARE (IN PERCENTAGE)		
		OVERALL	*RURAL*	*URBAN*	*OVERALL*	*RURAL*	*URBAN*	*OVERALL*	*RURAL*	*URBAN*
1	Debit Cards/ Micro ATM	75.2	73.3	83.6	21.8	23.3	15.4	03.0	03.4	01.0
2	Credit Cards	28.6	25.8	40.6	58.3	60.5	49.0	13.0	13.6	10.4
3	Mobile Banking	47.2	45.0	56.8	39.2	40.4	33.9	13.6	14.6	09.4
4	NEFT	32.6	28.8	48.4	41.2	43.1	33.6	26.2	28.1	18.0
5	RTGS	22.4	20.2	32.0	46.8	46.3	48.7	30.8	33.5	19.3
6	ECS	10.5	08.2	20.1	51.8	51.6	55.5	37.6	40.8	24.5
7	IMPS	18.3	15.5	29.9	46.3	45.9	48.2	35.4	38.6	21.9
8	AEPS	09.0	06.9	18.0	50.6	49.1	56.8	40.4	44.1	25.3
9	E wallets / Mobile wallets	34.2	32.2	42.7	41.2	42.3	36.5	24.6	25.4	20.8
10	Bank Prepaid Cards	12.7	10.1	23.7	52.4	52.1	53.4	35.0	37.8	22.9
11	Digishala	08.4	06.7	15.9	46.6	44.7	54.9	44.9	48.6	29.2
12	Green Channel / Green Pin	15.0	12.7	24.5	47.0	46.0	51.0	38.0	41.3	24.5

Respondents are asked to indicate the right answer on their awareness and usage. To know the awareness status, respondents were asked whether they are aware of the product and were required to answer either in *yes* or *no* form. To know the usage status, respondents were asked whether they use the product and were required to answer either in *yes* or *no* form.

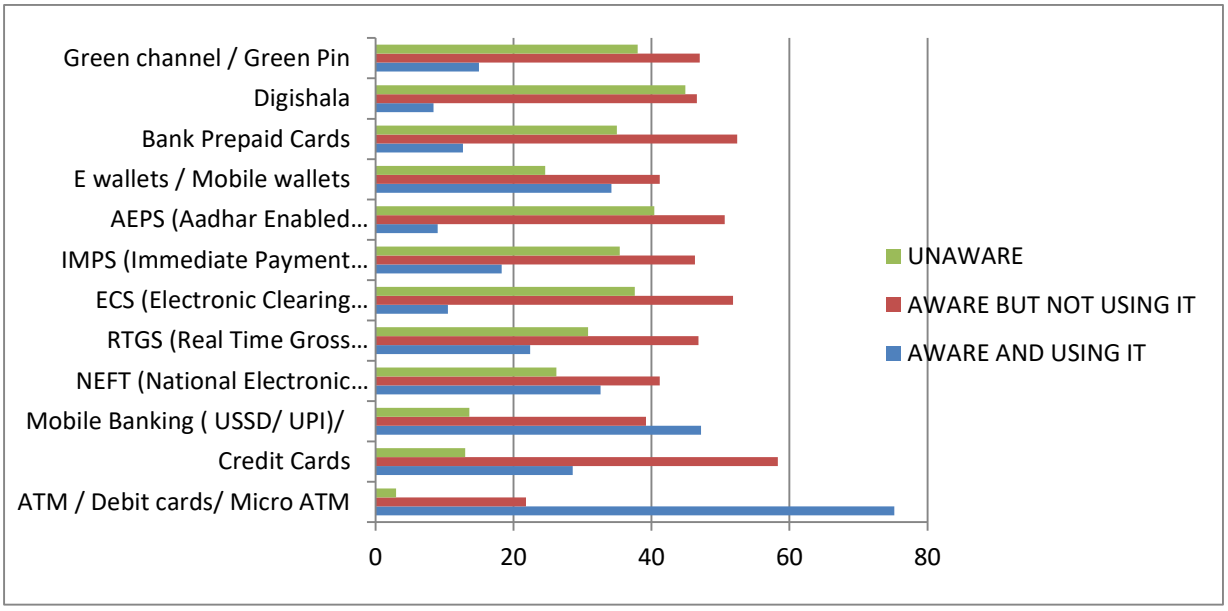

Figure 6.7: Bar diagram on overall status of awareness / use /unawareness of digital products / services

Details of the *Status of Awareness/Use/Unawareness of Digital Products / Services* are given in Table 6.4 as above. The *Overall Status of Awareness / Use /Unawareness of Digital Products / Services* is represented graphically by Bar Diagram in Figure 6.7 as above.

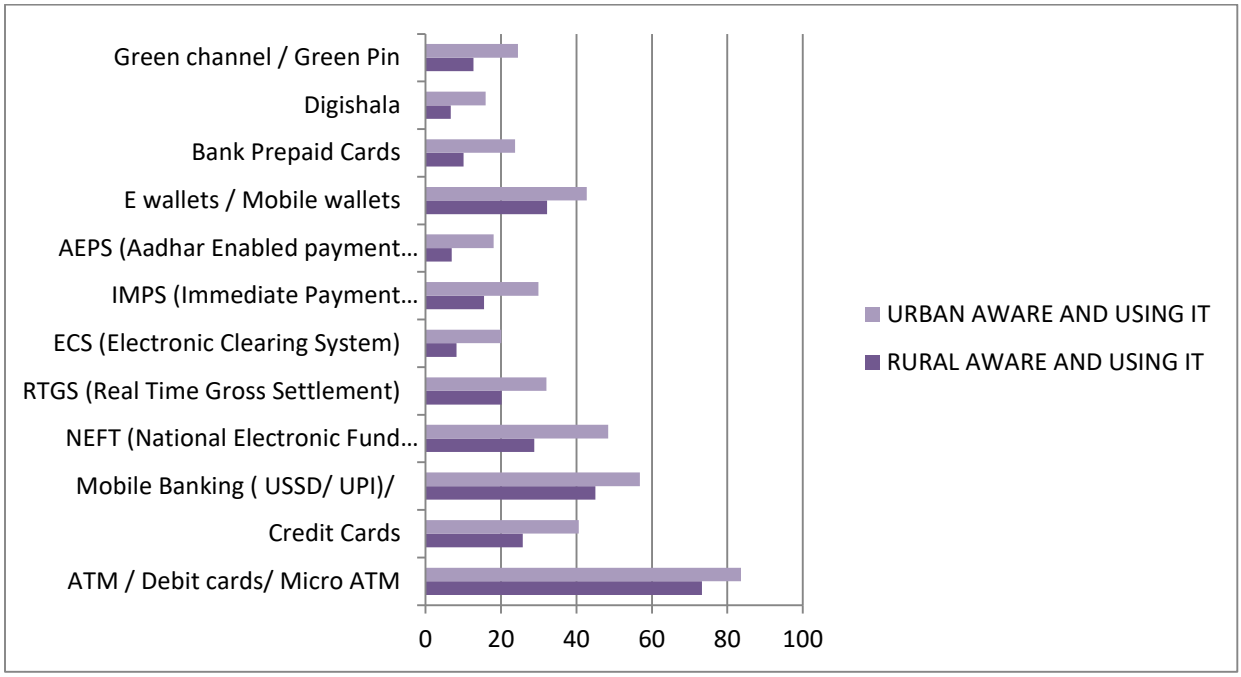

Figure 6. 8: Bar diagram of awareness and use of digital products / services

The Bar Diagram of only *Awareness and Use of Digital Products / Services* is represented in Figure 6.8 as above. Table 6.5 below represents the *Status of Awareness and Use of Digital Products / Services in Percentages.*

Figure 6.9 above represents the Bar Diagram of *Overall Aware But Not Using Digital Products / Services with Rural Urban Breakup*. Table 6.6 below gives details of the status of overall aware *But Not Using Digital Products / Services.* Figure 6.10 below is the bar diagram of *Aware But Not Using Digital Products / Services with Rural Urban Breakup.*

Table 6.5: Status of awareness and use of digital products / services

Sl no	PRODUCT	AWARE AND USING IT (IN PERCENTAGE)		
		OVERALL	***RURAL***	***URBAN***
1	Debit cards/ Micro ATM	75.2	73.3	83.6
2	Credit Cards	28.6	25.8	40.6
3	Mobile Banking (USSD/ UPI)/	47.2	45.0	56.8
4	NEFT (National Electronic Fund Transfer)	32.6	28.8	48.4
5	RTGS (Real Time Gross Settlement)	22.4	20.2	32.0
6	ECS (Electronic Clearing System)	10.5	08.2	20.1
7	IMPS (Immediate Payment Service)	18.3	15.5	29.9
8	AEPS (Aadhar Enabled Payment System)	09.0	06.9	18.0
9	E wallets / Mobile Wallets	34.2	32.2	42.7
10	Bank Prepaid Cards	12.7	10.1	23.7
11	Digishala	08.4	06.7	15.9
12	Green Channel / Green Pin	15.0	12.7	24.5

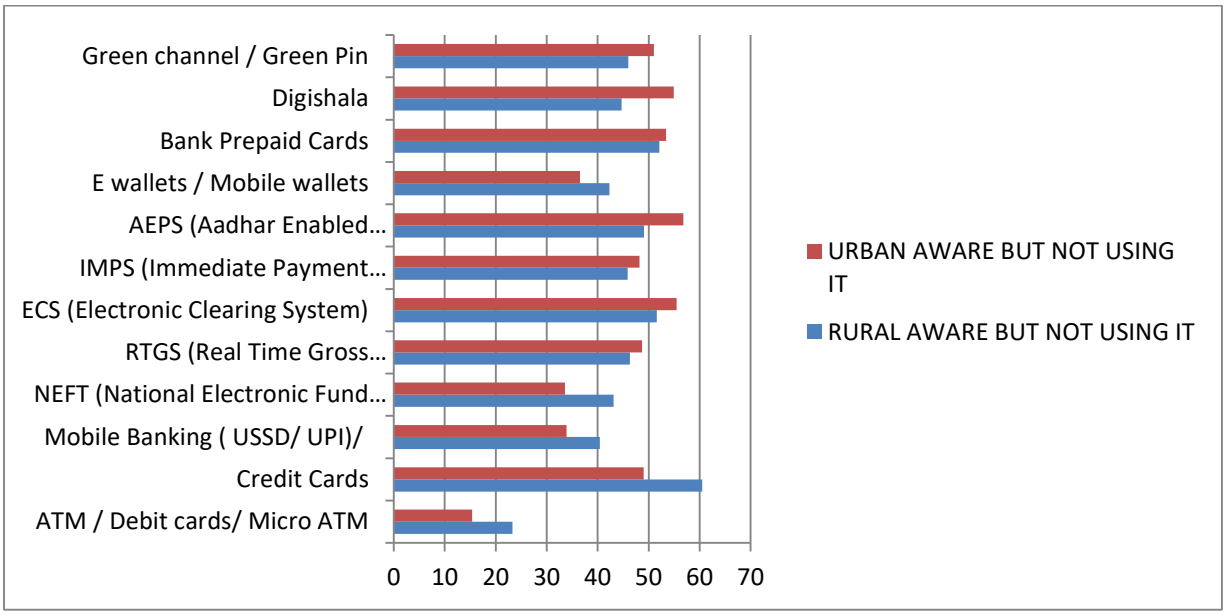

Figure 6.9: Bar diagram of overall aware but not using of digital products / services(rural urban breakup)

Table 6. 6: Status of aware but not using digital products / services

Sl no	PRODUCT	AWARE BUT NOT USING IT (IN PERCENTAGE)		
		OVERALL	*RURAL*	*URBAN*
1	Debit cards/ Micro ATM	21.8	23.3	15.4
2	Credit Cards	58.3	60.5	49.0
3	Mobile Banking (USSD/ UPI)/	39.2	40.4	33.9
4	NEFT (National Electronic Fund Transfer)	41.2	43.1	33.6
5	RTGS (Real Time Gross Settlement)	46.8	46.3	48.7
6	ECS (Electronic Clearing System)	51.8	51.6	55.5
7	IMPS (Immediate Payment Service)	46.3	45.9	48.2
8	AEPS (Aadhar Enabled Payment System)	50.6	49.1	56.8
9	E wallets / Mobile wallets	41.2	42.3	36.5
10	Bank Prepaid Cards	52.4	52.1	53.4
11	Digishala	46.6	44.7	54.9
12	Green channel / Green Pin	47.0	46.0	51.0

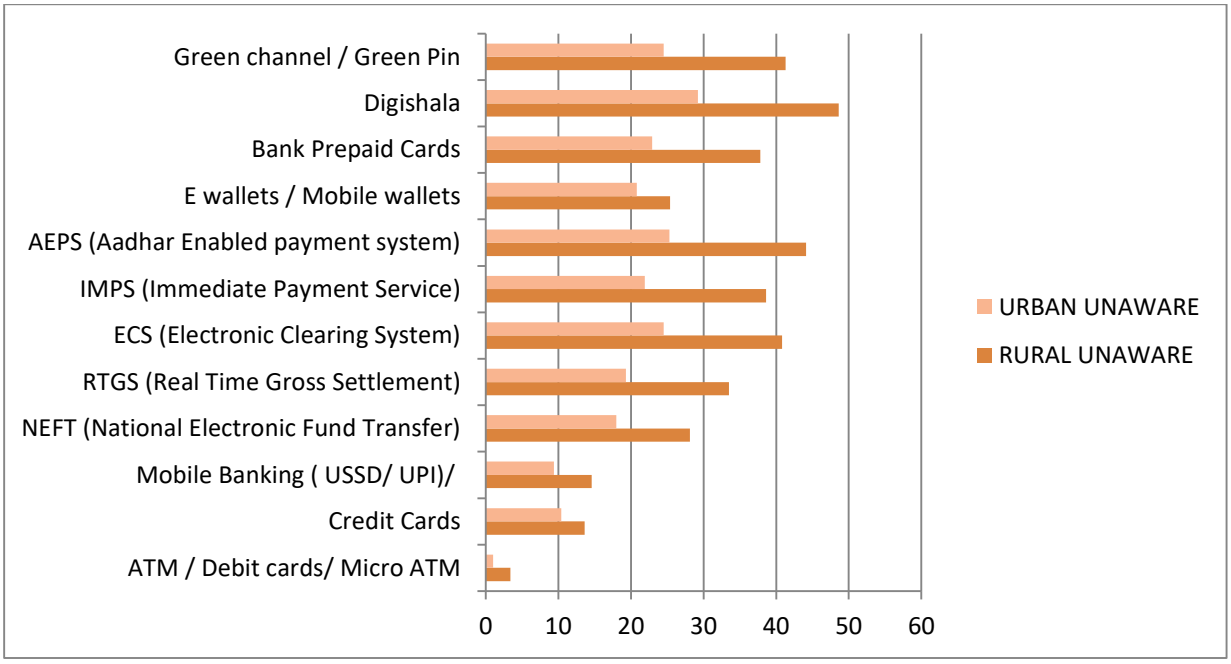

Figure 6. 10: Bar diagram of aware but not using digital products / services (rural urban breakup)

Further Table 6.7 below represents the *Status of Unawareness of Digital Products / Services.*

Table 6. 7: Status of unawareness of digital products / services

Sl no	PRODUCT	UNAWARE (IN PERCENTAGE)		
		OVERALL	*RURAL*	*URBAN*
1	Debit cards/ Micro ATM	03.0	03.4	01.0
2	Credit Cards	13.0	13.6	10.4
3	Mobile Banking (USSD/ UPI)/	13.6	14.6	09.4
4	NEFT (National Electronic Fund Transfer)	26.2	28.1	18.0
5	RTGS (Real Time Gross Settlement)	30.8	33.5	19.3
6	ECS (Electronic Clearing System)	37.6	40.8	24.5
7	IMPS (Immediate Payment Service)	35.4	38.6	21.9
8	AEPS (Aadhar Enabled Payment System)	40.4	44.1	25.3
9	E wallets / Mobile wallets	24.6	25.4	20.8
10	Bank Prepaid Cards	35.0	37.8	22.9
11	Digishala	44.9	48.6	29.2
12	Green Channel / Green Pin	38.0	41.3	24.5

6.5.1 Debit Cards/ Micro Atm:

With regard to the use of ATM / Debit cards/ Micro ATM, the overall awareness and use of the product is 75.2 percent (out of which 73.3 percent is concentrated in the rural areas and 83.6 percent is concentrated in the urban areas). *ATM/ Debit cards/ Micro ATM* are quite popular. The percentage of overall awareness but not using it is 21.8 percent. Therefore no major action is required to promote it.

6.5.2 Credit Cards:

With regard to the use of Credit Cards, the overall awareness and use of the product is 28.6 percent (out of which 25.8 percent is concentrated in the rural areas and 40.6 percent is concentrated in the urban areas). The percentage of overall awareness but not using it is 58.3 percent. With regard to *Credit Card*, the default rate of customers in payment is very high. As such many of the nationalised banks are not motivated to promote *Credit Card*. Presently *Credit Card* business is done in the majority of the cases by the private sector banks. Except a few

nationalised banks like SBI, CBI and the like, other banks are still considering or are at the initial phase of issuing *Credit Card* to the customers. The task of evaluating the credit portfolio of customers is considered to be full of hassles by the bank.

6.5.3 Mobile Banking (USSD/ UPI):

With regard to the use of Mobile Banking (USSD/ UPI), the overall awareness and use of the product is 47.2 percent (out of which 45 percent is concentrated in the rural areas and 56.8 percent is concentrated in the urban areas). The percentage of overall awareness but not using it is 39.2 percent. With regard to *Mobile Banking*, besides availing the services of nationalized and private banks, customers are using Google pay. The offer has limits in terms of volume of transaction for *Mobile Banking*. Google pay provides the facility of cash back offers when customers do transactions through the portal. But banks have no offer or discount when customers do transaction through the specific bank portal. Further in mobile banking, the fraud cases are very high. As such many customers have become skeptical in using the services of mobile banking and have developed a second thought. Many customers have approached the banks to close or de-register their *Mobile Banking* account.

6.5.4 NEFT (National Electronic Fund Transfer):

With regard to the use of NEFT (National Electronic Fund Transfer), the overall awareness and use of the product is 32.6 percent (out of which 28.8 percent is concentrated in the rural areas and 48.4 percent is concentrated in the urban areas). The percentage of overall awareness but not using it is 41.2 percent. The popularity of *NEFT* is growing. But some of the customers find the registration process full of hassles. At the same time they find it quite risky to operate transactions digitally as the onus lies on the self in case of erroneous transfer.

6.5.5 RTGS (Real Time Gross Settlement):

With regard to the use of RTGS (Real Time Gross Settlement), the overall awareness and use of the product is 22.4 percent (out of which 20.2 percent is concentrated in the rural areas and 32 percent is concentrated in the urban areas). The percentage of overall awareness but not using it

is 46.8 percent. In *RTGS* Transaction, banks give limits. This policy of allocating limit for RTGS transaction is a demotivation for the people as reported from the field survey. As such the customers prefer to directly visit the bank and do the transaction. In order to make RTGS more popular, more awareness has to be created among the people. At the same time in order to make Real Time Gross Settlement more practical, policies issues are involved.

6.5.7 ECS (Electronic Clearing System):

With regard to the use of ECS (Electronic Clearing System), the overall awareness and use of the product is 10.5 percent (out of which 8.2 percent is concentrated in the rural areas and 20.1 percent is concentrated in the urban areas). The percentage of overall awareness but not using it is 51.8 percent. On necessary agreement, all the banks that are members of any payment system participate on NACH system as destination Banks. *ECS* is often non operative due to non empanelment of a remote area bank under the Bank's mapping. NACH (National Automated Clearing House) does not take responsibility for banks that does not have *ECS* facility. Therefore in order to make Electronic Clearing System popular, policies issues are involved.

6.5.8 IMPS (Immediate Payment Service):

With regard to the use of IMPS (Immediate Payment Service), the overall awareness and use of the product is 18.3 percent (out of which 15.5 percent is concentrated in the rural areas and 29.9 percent is concentrated in the urban areas). The percentage of overall awareness but not using it is 46.3 percent. There are reported cases where the Remitter has the mobile banking Apt in the mobile phone, but the mobile number of the Beneficiary does not appear to be registered with any bank account. Such situation does not permit the registered bank account holder to remit money to the Beneficiary using Mobile Number and Mobile Money Identifier (MMID). At the same time some of the customers complain that transaction fee is a bit high because of which they are demotivated to use IMPS. Further many bank account holders lack knowledge about the fact that a seven digit Mobile Money Identifier (MMID) number is required for IMPS. Moreover the specific mobile number has to be wired with the concerned bank account of the customer where IMPS facility has to be used. Therefore it can be opined that presently with regard to *IMPS (Immediate Payment Service),* there is lack of awareness on the process of its usage.

6.5.9 AEPS (Aadhaar Enabled Payment System):

With regard to the use of AEPS (Aadhar Enabled payment system), the overall awareness and use of the product is 9 percent (out of which 6.9 percent is concentrated in the rural areas and 18 percent is concentrated in the urban areas). The percentage of overall awareness but not using it is 50.6 percent. There are complaints that AEPS has a major issue related to transaction failure. At the same time the procedure of lodging complains in case of transaction failure is full of hassles. As the NRC Process is going on and yet to be complete, *Adhaar Cards* are not compulsory in this part of the country. Hence *AEPS* is not fully functional in the north east and the process of issuing *Adhaar Cards* is still going on. DigiShala can be made more popular to promote AEPS.

6.5.10 E-Wallets/ Mobile Wallets:

With regard to the use of E wallets / Mobile wallets, the overall awareness and use of the product is 34.2 percent (out of which 32.2 percent is concentrated in the rural areas and 42.7 percent is concentrated in the urban areas). The percentage of overall awareness but not using it is 41.2 percent. There is lack of proper awareness for *E wallets* and *Mobile wallets*. Such services are more used by business class, corporate executives and the elite sections of the society. More awareness has to be created for such service.

6.5.11 Bank Prepaid Cards:

With regard to the use of Bank Prepaid Cards, the overall awareness and use of the product is 12.7 percent (out of which 10.1 percent is concentrated in the rural areas and 23.7 percent is concentrated in the urban areas). The percentage of overall awareness but not using it is 52.4 percent. For bank prepaid cards normally adequate protection is not provided to the customers. In fact the same degree of protection is not provided like debit or credit cards when fraudulent cases are reported. Prepaid debit cards are transactional cards on imprest principle. Prepaid cards therefore cannot help one to build a strong credit history. While using prepaid cards, one is not using a line of credit and do not need to pay a monthly bill to repay the debt. Customer's activity is not reported to credit reporting agencies. As such for pre paid card, there is a limit set by the bank. Normally minimum service account can be opened for availing the service of *Bank Prepaid Cards*. It is given to CC (Cash Credit) account holders by banks. But at the time of adding the name of the beneficiary, it has to be vouched by the banker. Therefore bank has a

certain degree of control in the final permission for the operation of *Bank Prepaid Cards.* Because of such procedural process, it is not popular among customers.

6.5.12 Digishala:

With regard to the use of Digishala, the overall awareness and use of the product is 8.4 percent (out of which 6.7 percent is concentrated in the rural areas and 15.9 percent is concentrated in the urban areas). The percentage of overall awareness but not using it is 46.6 percent. DigiShala is basically offered as a free DTH channel to teach and inform the people about the various modes of digital payments. The channel is intended to help people understand the use of unified payments interface (UPI), USSD, Aadhaar-enabled Payments System, Electronic wallets, Debit and Credit Cards. Till date in this part of the country, people are very less aware of *DigiShala*. Therefore more awareness has to be created for the use of *DigiShala*. In order to educate people on the use of DigiShala, master trainers may be used. Such master trainers may be selected and properly trained at designated Nodal Centres and then deputed for imparting trainings on the use of DigiShala.

6.5.13 Green Channel (Sbi) / Green Pin:

With regard to the use of Green channel (SBI)/ Green Pin, the overall awareness and use of the product is 15 percent (out of which 12.7 percent is concentrated in the rural areas and 24.5 percent is concentrated in the urban areas). The percentage of overall awareness but not using it is 47.0 percent. The *Green Channel* counter of SBI is operative at all its branches of the bank ideally. Here, customers of the bank can transact without using any pay in-slip, withdrawal forms, cheque books or remittance forms. This initiative saves paper, and contributes to 'green banking'.Though *Green Channel* was an initial initiative of State Bank of India, other banks have also started *Green Pin facility*. Here the banks do not send any hard copy of the step wise instruction and secret pin number to the customer with the kit at the time of opening account. Instruction is given to the account holder to directly go to the concerned bank ATM and generate Pin of ATM’s. But in such situations also, a segment of the customers fail and deliberately neglect to do so. They feel that there may be errors in doing so and therefore they physically go to the bank where his / her account is maintained and approach the bank officials for assistance.

6.5.14: ADDITIONAL FINDINGS (RELATED TO COST OF DIGITAL TRANSACTIONS)

During the period of conducting the research, in the month of July 2019, an important question that arose in the field was the impact of cost aspect in terms of;

Whether respondents feel that bringing down the cost of digital transactions will give a boost to the increase of digital payments (transactions).

As a matter of fact Reserve Bank of India (RBI) through its policy in July 2019 led to the waiver of charges levied on NEFT and RTGS transaction. At the same time there was waiver of IMPS charges from August 2019. Further The National Payment Corporation of India (NPCI) has revised the Merchant Discount Rate (MDR) to 0.03 percent (from the earlier 0.25 percent) with a ceiling of Rs 100 per transaction from October, 2019. In order to answer the question, a focus group interview was conducted. The focus group was conducted with a team comprising of *7 Bank Officials* that lasted for 1½ hours. It was basically to know the reaction of the respondents with the slashing of NEFT and RTGS charges recently by RBI.

Focus Group Discussion revealed that slashing of the charges has not made any major (or direct) impact by increasing or decreasing the amount of NEFT / RTGS transactions done. Those people who use NEFT or RTGS facility as a professional requirement / for transfer of money in business dealings / or as a requirement for job application, will have to do it whether the NEFT charges increases or decreases. Findings of the field work reveal that customers are doing transactions through digital mode because they have understood the benefit of conducting such transactions. Such customers are voluntary doing transactions through digital mode as it is convenient for them and saves time. Here the incentive related to increase / decrease /waiver of cost (charges) for doing digital transaction is not an issue for them.

It has been agreed that on an overall basis, there is a gradual increase of digital transactions. For banks, doing digital transaction by customer' decreases their monotonous and manual routine banking jobs. And in return banking officials can devote more time for marketing activities. At the same time a section of banks in order to promote more digital transaction are unofficially discouraging doing physical transactions by customers. They are promoting physical transactions

only for senior citizens and the illiterates. Discussions reveal that the customers who are using NEFT and RTGS facility admire the benefit of fast transfer of money through this mode. The impact of charges (cost) for conducting various digital transactions are perceived by the customers to be quite minimal compared to the cost incurred by them in terms of money, time and energy in conducting physical transaction by personally going to the bank.

ACTION REQUIRED: Therefore what is more important for increasing digital transaction is to create awareness about the usefulness cum benefits of conducting digital transactions, educate the customers and adopting befitting measures for the capacity building among them.

CHAPTER 7

ROLE OF SOCIAL MARKETING IN PROMOTING A DIGITAL AND CASHLESS BANKING ECONOMY

7.1 Background

Marketing is a tacit way of recognizing needs of the consumers and fulfilling them. Social marketing on the other hand is a way of marketing of notions and ideas for social well being and bring about progress in the society. Social marketing is often referred to as cause related marketing as its fundamental goal is to bring about social change in the society. Prominent scholars like Kotler and Zaltman (1971), views social marketing as the process of formulating, implementing and controlling programs with a view to persuade the acceptance of ideas which are by nature social in character. Farrelly, Duke, Davis and Juster (2012) found that social marketing with moving and vivid content is an important tool to inspire prospective targets towards a cause. Further Davis, Gilpin, Loken, Viswanath and Wakefield (2008) found advertisements creating strong emotional sensation to have significant impact on the younger generation in fighting for a cause. In a vast country like India, social marketing for the promotion of a digital environment is ardently felt. This is essentially to move the country forward and make it at par with the developed nation of the world. In fact the solution lies in making the process culturally relevant so as to enlighten the people of its benefits and practices it in the day to day life. Accordingly the fifth objective for this research study has been formulated as;

To explore the scope of social marketing in creating a positive environment towards digital and cashless banking economy.

In Assam, the Government through *Janasanjyog* (the Communication Wing of Govt. of Assam) uses social marketing to create awareness on various critical issues like dengue fever, family planning, vaccination, women empowerment, child education and the like. Similar campaigns for the promotion of digital India can be carried out by the various Governments funded organisation

at the national level having pan India presence or state level as well as selective private organisations through social marketing.

7.2 Methodology

Based upon the findings of the fieldwork related to the current perception of common mass towards digitalization, identification of key persons in a family who conducts digital transactions, identifying the impending barriers in inculcating a culture of digital and cashless banking and the present status with respect to penetration of digital transaction in the daily life of the urban and rural masses, an effort was made to explore the scope of social marketing in creating a positive environment towards digital and cashless banking. Accordingly several advertisement themes has been identified as well as developed and relevant advertisement copy has been developed for each theme as selected. Help of local artists has been also taken to draw cartoon / sketches relevant to the background of each advertisement theme developed. The themes are both in English and Assamese versions as below.

Table 7. 1: List of Advertisement Themes

ADVERTISEMENT THEME NO 1	"□□□□□□□□□□□□□□□□–□□□□□ □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□" *(Come out! Oh Youths of the Nation, With Digital India let us bring Progress!)*
ADVERTISEMENT THEME NO 2	"□□□□□□□□□□□□□□□□□□□□□□□□□□ □□–□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□" *(Digital Transactions has now liberated me from the evil acts of deception and forgery)*
ADVERTISEMENT THEME NO 3	"□□□□□□□□□□□□□□□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□?" *(I am a proud citizen of Digital India, Are you?)*

Table 7. 2: List of Advertisement Themes

ADVERTISEMENT THEME NO 4	"□□□□□□□□□□□□□□□□□□□□□□□□□□□□! □□□□□□□□□□□□□□□□’□□□’□□□□□□□□□□ □□□□□□□□□□□□□□□□□□□□□□□□□□□” *(My life has become easy! Digital India has enabled me to avail banking services anywhere and at any time)*
ADVERTISEMENT THEME NO 5	"□□□□□□□, □□□□□□□□□□ □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□” *(New Indian with a new Horizon, Digitization has given a new era of Vision)*
ADVERTISEMENT THEME NO 6	"□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ □□□□□□□□□□ □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□ □□□□□□□” *(Digital India has given me a new sense of strength; I am relieved from the burden of holding hard cash)*
ADVERTISEMENT THEME NO 7	Work Digitally, Think Globally

ADVERTISEMENT THEME NO 1

"□□□□□□□□□□□□□□□–□□□□□
□□□□□□□□□□□□□□□□□□□□□□□□□□□"

(Come out! Oh Youths of the Nation,
With Digital India let us bring Progress!)

ADVERTISEMENT THEME NO 2

"□□□□□□□□□□□□□□□□□□□□□□□
□□–□□□□□□□□□□□□□□□□□□□□□□□□□□"

(Digital Transactions has now liberated me from the evil acts of deception and forgery)

ADVERTISEMENT THEME NO 3

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□□□□□□□□□□□□□□□□□□□□□□□□□?"

(We are proud citizen of Digital India, Are you?)

ADVERTISEMENT THEME NO 4

“□□□□□□□□□□□□□□□□□□□□□□□□□□□□!
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(My life has become easy! Digital India has enabled me to avail banking services anywhere and at any time)

ADVERTISEMENT THEME NO 5

“□□□□□□□, □□□□□□□□□□
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”

(New Indian with a new Horizon,
Digitization has given a new era of Vision)

ADVERTISEMENT THEME NO 6

"□□□□□□□□□□□□□□□□□□□□□□□□□□□□
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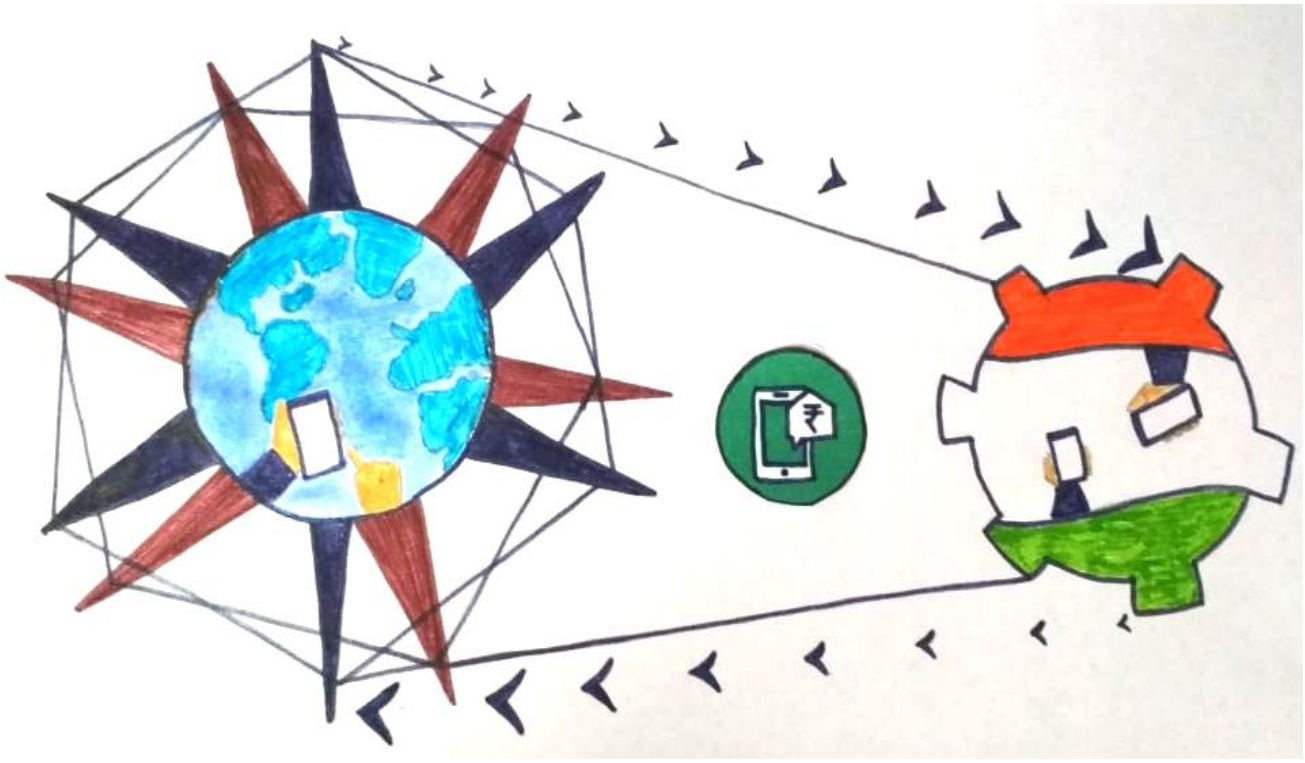
(Digital India has given me a new sense of strength; I am relieved from the burden of holding hard cash)

ADVERTISEMENT THEME NO 7



Work Digitally, Think Globally

CHAPTER 8

ROLE OF SELF HELP GROUPS (SHG) IN PROMOTING CASHLESS BANKING AND MECHANISM FOR THE SAME

8.1 Background

Model is a composition of concepts that helps to make complex things simple and easier to understand. It provides a snapshot where one can understand the interplay of numerous interlinked variables that results into a particular phenomenon. Literature abounds with numerous models of varied types and nature. Among the many models, mention can be made of a few prominent ones like the Verbal Model (that takes the help of meaningful sentences and phrases to understand a situation), Iconic Model (that takes the help of a miniature prototype of a physically build system to know a process), Schematic Model (that takes the help of relationship among variables by depicting in a diagrammatic manner), Analogue Model (that takes the help of an analogy to understand things) and the like. In the field of social science, Schematic Models are often used to explain relationships, roles and phenomena.

Self-Help Group refers to groups that are governed by self and controlled by peers. The group is from a particular economic background who works collectively for an identified common purpose. They are basically informal and the group associate to better the financial security of the members or other commonly identified interest in the line of area development, creating awareness for community development works, trainings and other capacity building works for the cause of the community from where they come from. Self help group can be identified as an important constituent for the implementation of various programmes for rural upliftment. SHGs can be also used as an important tool for participatory approach for the economic empowerment of communities. Accordingly the sixth objective for this research study has been formulated as;

To explore the scope of using SHG's for promoting cashless banking to the illiterates in the rural areas and building mechanism for the same.

With the background information as cited above, an effort is made to construct a suggestive model for the promotion of digital movement in the state of Assam. The model comprises of four entities. They are the Banks, the Self Help Groups, the Training Institutes and the Target Beneficiaries as shown in Figure 1. The primary goal is to create effective linkage of the mentioned four entities so as to educate the SHGs and the common mass in the aspect of financial literacy and processes related to availing digital products and services.

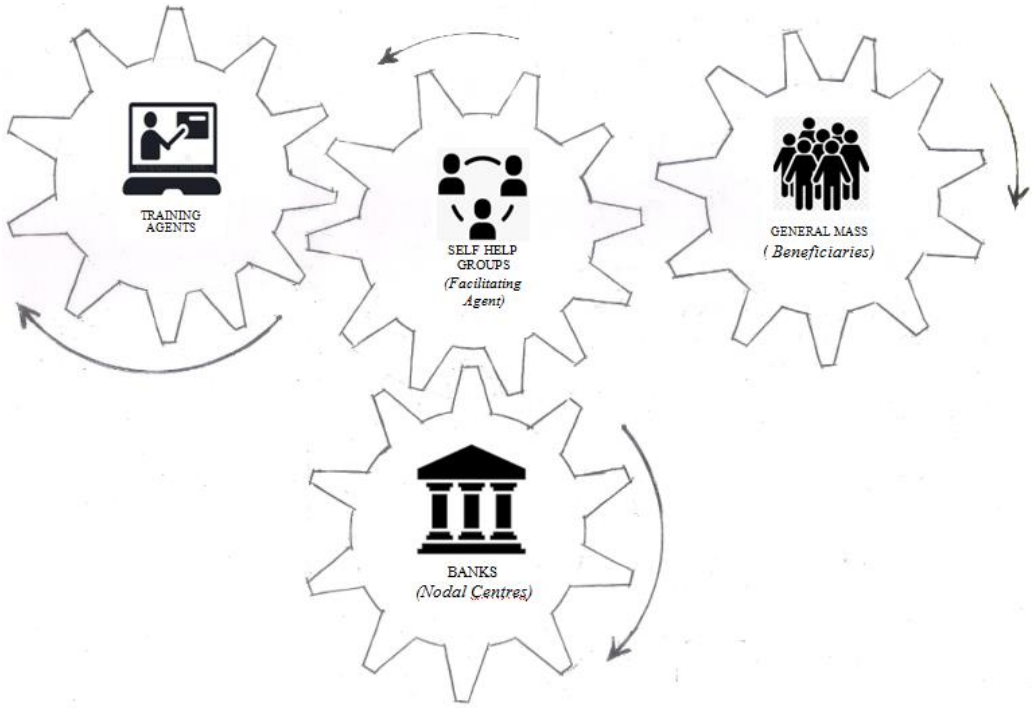


FIGURE 8.1: A MODEL FOR CAPACITY BUILDING TOWARDS DIGITALISATION

8.2 Role of banks

In the suggestive linkage mechanism, selected few banks will act as Nodal Centres. Banks will identify the SHGs having bank accounts with them. Each SHG will depute representatives who will be selected for training on digital products and procedures. Bank can show the expenses incurred in this exercises as part of CSR activities. Banks will further identify the Training Agencies / Institutes who will be imparting training to the selected groups. The Training Agents

may be the ones already selected by Assam State Rural Livelihoods Mission (ASRLM) in implementing the DeenDayalUpadhyayaGrameenKaushalyaYojana (DDU-GKY) Scheme being executed presently in a Public Private Partnership (PPP) mode in Assam. ASRLM in the process has selected several Project Implementing Agencies (PIAs) by a rigorous evaluation process on the aspect of knowing their competencies and capabilities in implementing the schemes. The PIA's presently acts as a facilitator in providing technical support though their training centres to help in capacity building in specific livelihood skills among the poor rural youths. At the same time, ARLMS from time to time reviews the performance of the selected PIAs on the basis based on various criteria and has selected the best performing PIA for the previous year 2018-19.

Similar to the above model of ARLMS, these PIAs may be used for imparting training on the theory and practice of using digital instruments to equip the people who are averse to the process of digitalization or digital literacy.

8.3 Role of Self Help Groups

Self Help Groups will act as facilitating agent in the process. For promoting cashless banking among the financially illiterate people in the rural as well as urban areas and building mechanism for the same, the SHG's may tie up with the identified Banks who may be designated as Nodal Centres as already mentioned. Selected Nationalized Banks and Regional Rural Banks (RRBs) like Assam GraminVikash Bank and Langpi Dihangi Bank (each having multiple branches in each district) may be used as the Nodal Centres. From the database of each bank, local SHGs maintaining bank accounts may be used as a facilitating agent for the promotion and creating awareness towards digital transactions on the common mass (i.e. the Beneficiary). At the same time banks can offer loans to SHG's who take substantial initiatives towards digitalization at lower rate of interest than the market rate as a motivation.

8.4 Role of training agents

Training Agents will be used for imparting training to the selected SHG members on the process of using various digital products available. The various Agencies who have experience and worked at the field level in the selected districts in already executed ARLMS Projects in 2018-2019 are given below. Possibility can be explored for using them in the field of training on the

use of digital products. They will be directly reporting to the nodal banks in execution of the work.

Table 8. 1: List of Probable Training Agents for the Selected Districts

Sl No	DISTRICT	PROBABLE TRAINING AGENTS
1	BARPETA	Indiacan Education Pvt Ltd, Teamlease
2	BONGAIGAON	Gram TarangEmplolyability Training Services, Endeavor Careers, ICA EduSkills Pvt. Ltd. - II
3	GOALPARA	Indiacan Education Pvt Ltd, Gram TarangEmplolyability Training Services,
4	JORHAT	ICA Edu Skills Pvt.Ltd, NIIT YuvaJyoti Ltd. (P-II)
5	KAMRUP METRO	Gram TarangEmplolyability Training Services, Apollo MedSkillsPvt.Ltd- 1, Disha Educational Society, Surya Wires, Think Skills Consulting Pvt. Ltd., Frostees Export Pvt. Ltd., NEDC, Endeavor Careers, Wazir Advisors, Donbosco
6	KOKRAJHAR	Donbosco, Gyanjyoti Foundation, ACME
7	NAGAON	RojgarVikas Education, Gem Learning, Sumathi Corporates,
8	NALBARI	Gram TarangEmplolyability Training Services, Quess Corp., Amazing,
9	SONITPUR	Gram TarangEmplolyability Training Services, Indiacan Education Pvt Ltd, Wazir Advisors, Bosco, SIDH Trading,
10	TINSUKIA	Gram TarangEmplolyability Training Services, Indiacan Education Pvt Ltd, Shri Siddihivinayak, Jaikandele

Source: Annual Report 2018-2019 ASRLM, https://asrlms.assam.gov.in

8.5 Training Modules

Basic Modules (on education on different facilities and products available, technical issues and processes for availing the services, tackling triggered errors, do's and do not's in the use of Debit Card / Credit Card/ Net Banking and the like) may be developed for imparting training to the selected targets.

8.6 Identified Banks As Nodal Centres

The identified banks who can be used as Nodal Centres for the proposed Model are the Assam Co-Operative Apex Bank, Ltd.AssamGraminVikash Bank, LangpiDehangi Rural Bank, State Bank of India, Allahabad Bank, other selected Nationalised Banks and RRB's.

Below is the statistics of the number of SHG's in the selected districts. The huge figure of SHG's are their total number of memberships speaks out that the SHG's can be productively used for the proposed Model linkage.

Table 8. 2: Status of SHG's in Assam in the selected districts

Sl No	**District name**	**Total SHGs**	**Total no of members**
1	Barpeta	10,601	1,14,132
2	Bongaigaon	6,327	69,890
3	Goalpara	7807	81775
4	Jorhat	7949	83664
5	Kamrup Metro	2671	27580
6	Kokrajhar	7514	82086
7	Nagaon	16972	176346
8	Nalbari	8718	90435
9	Sonitpur	9507	98062
10	Tinsukia	8580	90191

Source: https://nrlm.gov.in/shgReport: Self Help Group Report Designed, Developed, hosted & maintained by National Informatics Centre, Content provided and maintained by Ministry of Rural Development, Govt. of India, September 11, 2019, 1:16:28 PM

CHAPTER 9

SUMMARY OF MAJOR FINDINGS AND COCLUSION

9.1 Major Findings:

OBJECTIVE 1: CURRENT PERCEPTION OF COMMON MASS TOWARDS DIGITALIZATION AND CASHLESS TRANSACTIONS.

23. Respondents are most agreeable to the statement that digital and cashless economy will help reduce the risk of holding cash followed by the statement that it is very convenient as it is anytime anywhere banking.
24. Respondents are least agreeable to the statement that banks should discourage branch visits to encourage digital transactions.
25. There is a significant difference in the perception that digital banking is meant for tech savvy people and that digital and cashless economy will be very convenient for all as it is anytime anywhere banking with respect to respondents from urban and rural areas.
26. Respondents in the rural areas are more agreeable to the statement that digital banking is meant for tech savvy people.
27. Respondents in the urban areas are more agreeable to the statement that digital and cashless economy is very convenient for all as it is anytime anywhere banking.
28. Respondents in the age group of 18-25 are more open to the concept of digitalization and cashless banking than respondents in the senior age groups viz. 45 and above.
29. Respondents with relatively higher education level are more positive towards embracing digitalization and cashless banking than respondents with lesser education.
30. Discounts and offers help attract people in the lesser income levels towards digitalization and cashless banking more than people in the higher income levels.

31. Public sector /Government employees feel that digitalization is meant for tech savvy people, they also feel that it is very convenient and helps avail various offers and discounts.
32. Self employed people do not feel that it is convenient or very safe way of transacting. They also do not feel that digitalization will lead to overall progress and development of the country.

OBJECTIVE 2: KEY PERSONS IN A FAMILY WHO CONDUCTS DIGITAL TRANSACTIONS.

33. Majority of the respondents opine that their children are the ones in the family who are the most Phone/ Tech savvy.
34. Wives are found to be the least Phone/ Tech savvy in the family.
35. It is also interesting to observe that 10 percent of the respondents have opined that nobody in the family is Phone/Tech savvy.
36. Majority of the respondents in the rural areas have said that children are the most Phone/Tech savvy person in the family whereas majority of the respondents in the urban areas have said that husbands are the most tech savvy person in the family.
37. Respondents also opine that it is mostly the children in the family who conduct digital transactions or make online purchases.
38. Also respondents from both rural areas as well as the urban areas have said that children are the ones who mostly conduct digital transactions or makes online purchases
39. Wives are again identified as the ones who normally do not conduct digital transactions or make online purchases.
40. It is also seen that 11.7 percent of the respondents have said that no one in the family conducts digital transactions or makes online purchases.

OBJECTIVE 3: IMPENDING BARRIERS IN INCULCATING A CULTURE OF DIGITAL AND CASHLESS BANKING.

41. Respondents perceive electricity and internet connectivity issues as barriers to digitalization and cashless transactions.
42. Also they perceive that people are not aware of all the digital products which are available and its usage
43. Also it is observed that respondents do not perceive digital transactions to be very complicated and full of hassles. Hence from the study perspective this is not an impending barrier to digitalization and cashless transactions.
44. Respondents in the rural areas are more agreeable to the statements that that digital transactions are very complicated and full of hassles, in digital transactions, there is perceived risk of fraud, a culture of digital and cashless banking is missing, people are not aware of all the digital products which are available and its usage, there is a risk of committing errors and losing money, the processes involved in conducting digital transactions are not easy to understand , it is a technical subject and beyond the comprehension of common masses and that electricity and internet connectivity issues are involved

OBJECTIVE 4: PRESENT STATUS WITH RESPECT TO PENETRATION OF DIGITAL TRANSACTION IN THE DAILY LIFE OF THE URBAN/RURAL MASSES.

PENETRATION OF DIGITAL FACILITIES / PRODUCTS

JAN DHAN ACCOUNT: Jan Dhan Account has low penetration with 28.20 percent on an overall basis with 25.60 percent in rural areas and 26.60 percent in the urban areas. This indicates that there is massive scope for opening Jan Dhan Account. But a major segment of the population considers Jan Dhan Accounts as poor man's bank account.

SAVINGS BANK ACCOUNT: Savings Bank Account is popular and has high penetration with 90.50 percent on an overall basis with 90.80 percent in the rural areas and 89.60 percent in urban areas. Opening of such account enables safe cum secured banking transactions and enables to availing various bank benefits.

ADHAAR CARD: Adhaar Card issuance is not cent percent complete and has more than average penetration with 76 percent on an overall basis with 73.60 percent in rural areas and 85.90 percent in urban areas. Adhaar Card till now is not compulsory in the north eastern part of the country due to the ongoing NRC (National Register of Citizens) Exercise.

MOBILE PHONES: Mobile phones are very popular and have high penetration with 94.40 percent on an overall basis with 93.90 percent in the rural areas and 96.40 percent in the urban areas. Among the population possessing mobile phones, 83.90 percent are Android Phone owners (with 84.60 percent in rural areas and 82.50 percent in urban areas). Features phones are slowly phasing out.

PENETRATION OF VARIOUS MODES OF BANKING SERVICES

VISITING BANK PERSONALLY: The most popular mode as revealed by the field work is by visit to the bank personally. Availing banking service by personally visiting the bank is 84.40 percent (on an overall basis) out of which 82.1 percent is in rural areas and 94.10 percent is in urban areas. Culturally the people are still emotionally attached with availing banking services by visit to the bank personally as customers get personalized services.

SERVICES OF BANKING CORRESPONDENT / AGENTS: The percentage of people availing the services of banking correspondent / agents is 29.80 percent (on an overall basis) out of which 28.50 percent is in rural areas and 35.40 percent is in urban areas. It is an extension of normal banking service to maintain individual USP's. Further it is convenient for people who are engaged in multiple activities and have no spare time.

ONLINE MODE THROUGH MOBILE PHONE / COMPUTERS: The percentage of people availing online mode of banking services is 55.20 percent (on an overall basis) out of which 52.90 percent is in rural areas and 64.80 percent is in urban areas. The percentage in the urban areas is more than rural areas. This is a reflection that urban people are more techno savvy and comfortable with banking services through online mode. It also saves time, cost and is convenient for them.

PENETRATION OF VARIOUS TYPES OF DIGITAL TRANSACTIONS

ONLINE PAYMENT OF MOBILE PHONE BILL: The overall use of *Online Mode of Payment of Mobile Phone Bill* is 55.7 percent (out of which 53.9 percent is in rural areas and 63.3 percent is in urban areas). This indicates that the urban people are more techno savvy and comfortable with the process of making online payment of mobile bills. For them the process is convenient, saves time, user friendly and economical. But there is a need for the creation of more awareness and impart knowledge on the way to use it.

ONLINE PAYMENT OF ELECTRICITY BILL: The overall use of *Online Payment of Electricity Bill* is 43.8 percent (out of which 41.9 percent is in rural areas and 51.8 percent is in urban areas). The overall penetration rate indicates that there is scope for creation of more awareness among the public. But there are complaints of non updation of electricity bills even after payment before the due date. Therefore this technical issue has to be sorted out by the ASEB as well.

ONLINE PAYMENT OF PROPERTY TAX BILL: The overall use of *Online payment of Property Tax Bill* is 27.8 percent (out of which 28.7 percent is in rural areas and 24.2 percent is in urban areas). There are reports that the Mobile Apt does not function properly. At the same time the elderly people (senior people) are rather more comfortable with physical payment of Property Tax Bill as they use this opportunity as a way of socializing.

BOOKING OF LPG GAS ONLINE / SMS MODE: The overall use of *Online Booking of LPG Gas refill* is 48.8 percent (out of which 46.3 percent is in rural areas and 59.1 percent is in urban

areas). A segment of the population deliberately does not go for online LPG Gas booking as the booking service is provided by the LPG Gas Distribution Agency delivery man who provides much customized service even over phone.

ONLINE PAYMENT FOR LPG GAS REFILLING: The overall use of *Online payment for LPG Gas refilling* is 35.9 percent (out of which 37.3 percent is in rural areas and 30.2 percent is in urban areas). The usage rate is less in the urban areas compared to the rural areas as a major part of the urban customers are comfortable with the personalized service in terms of direct home delivery of cylinders as well as the refill booking given by the delivery man of Distribution Agency.

USING ONLINE NET BANKING/MOBILE BANKING: The overall use of Net Banking /Mobile Banking is 57.9 percent (out of which 56.2 percent is in rural areas and 65.1 percent is in urban areas). Its use is high in the urban areas compared to the rural areas. Rumours of online frauds and erroneous debits from bank accounts have made a segment of customers to stick to traditional banking system by personally visiting the bank. There is scope for creating awareness and educate the population on such products

CASHLESS (DEBIT CARD /CARD/PAYTM) PAYMENT: The overall use of *Cashless (Debit Card /Card/Paytm) Payment* is 58.3 percent (out of which 56 percent is in rural areas and 68 percent is in urban areas). Field work reveals the same finding on the use of cashless payments by *Debit Card* like the findings in the use of Net Banking / Mobile Banking.

BUYING GOODS / SERVICES ONLINE: The overall use of *Buying goods / Services online* is 66.3 percent (out of which 63.1 percent is in rural areas and 79.9 percent is in urban areas). It has been found that all categories of goods are not purchased online. There is limited scope of choice in some product categories as reported. Moreover there are reports of hidden cost and inaccurate information as displayed in the e-commerce portals. Further there are also reports of mismatch of delivery timing as promised.

TRANSACTIONS THROUGH CASH ON DELIVERY MODE: The overall conduct of transactions through *Cash on Delivery* (COD) mode is 70 percent (out of which 66.5 percent is in rural areas and 84.4 percent is in urban areas). Often there are complaints that products specification does not tally as what was promised in the online sites. As a result in order to avoid the risk, people prefer the COD mode of purchase. At the same time people do not have to part with cash at the time of ordering.

SUMMARY ON THE AWARENESS AND USE OF DIGITAL PRODUCTS / SERVICES

DEBIT CARDS/ MICRO ATM: The overall *awareness and use* of ATM / Debit cards/ Micro ATM is 75.2 percent (with 73.3 percent in rural areas and 83.6 percent in urban areas). *ATM/ Debit cards/ Micro ATM* are quite popular. Overall *awareness but not using it* is 21.8 percent. Therefore no action is required to promote it.

CREDIT CARDS: The overall *awareness and use* of Credit Cards is 28.6 percent (with 25.8 percent in rural areas and 40.6 percent in urban areas). Overall *awareness but not using it* is 58.3 percent. The default rate of customers is very high. Evaluating the credit portfolio of customers is full of hassles for banks.

MOBILE BANKING: The overall *awareness and use* of Mobile Banking (USSD/ UPI) is 47.2 percent (with 45 percent in rural areas and 56.8 percent in urban areas). Overall *awareness but not using it* is 39.2 percent. *Mobile Banking* has limits in terms of volume of transaction. *Mobile Banking* is competed by Google pay which provides cash back offers.

NEFT: The overall *awareness and use* of NEFT is 32.6 percent (with 28.8 percent in rural areas and 48.4 percent in urban areas). Overall *awareness but not using it* is 41.2 percent. Popularity of *NEFT* is growing. But some customers find the registration process full of hassles. For some NEFT is risky to operate as the onus lies on the self in case of erroneous transfer. The recent slashing of NEFT charges has not made any major impact.

RTGS: The overall *awareness and use* of RTGS is 22.4 percent (with 20.2 percent in the rural areas and 32 percent in urban areas). The overall *awareness but not using it* is 46.8 percent. In *RTGS* banks give limits hence de-motivating for customers. As such the customers prefer to directly visit the bank and do the transaction. To make it more practical, policies issues are involved.

ECS: The overall *awareness and use* of ECS is 10.5 percent (with 8.2 percent in rural areas and 20.1 percent in urban areas). The overall *awareness but not using it* is 51.8 percent. Hence more awareness has to be created. *ECS* is often non operative due to non empanelment of a remote area rural bank under the Bank's mapping. To make it more popular, policies issues are involved.

IMPS: The overall *awareness and use* of IMPS is 18.3 percent (with 15.5 percent in rural areas and 29.9 percent in urban areas). Overall *awareness but not using it* is 46.3 percent. People are not conversant on its use so there is scope to increase awareness related to the process of its usage including the requirement of seven digitMobile Money Identifier. Some customers complain of transaction fee as high.

AEPS: The overall *awareness and use* of AEPS is 9 percent (with 6.9 percent in rural areas and 18 percent in urban areas). The overall *awareness but not using it* is 50.6 percent. There are complaints that AEPS has a major issue related to transaction failure. As *Adhaar Cards* are not compulsory in this part of the country, it is not fully functional. Use of DigiShala may be stressed to help people understand the use of it.

E-WALLETS/ MOBILE WALLETS: The overall *awareness and use* of E wallets / Mobile wallets, is 34.2 percent (with 32.2 percent in rural areas and 42.7 percent in urban areas). The overall *awareness but not using it* is 41.2 percent. Such services are more used by business class, corporate executives and the elite sections of the society. More awareness has to be created for such service.

BANK PREPAID CARDS: The overall *awareness and use* of Bank Prepaid Cards is 12.7 percent (with 10.1 percent in rural areas and 23.7 percent in urban areas). The verall*awareness but not*

using it is 52.4 percent. For this product adequate protection is not provided to the customers by bank. For availing the service, minimum service account is to be opened by Cash Credit account holders of banks. As such it is not quite popular.

DIGISHALA: The overall *awareness and use* of Digishala is 8.4 percent (with 6.7 percent in the rural areas and 15.9 percent in urban areas). The overall *awareness but not using it* is 46.6 percent. Therefore more awareness has to be created for the use of *DigiShala*. In order to educate people on the use of DigiShala master trainers may be used.

GREEN CHANNEL (SBI) / GREEN PIN: The overall *awareness and use* of Green channel (SBI)/ Green Pin is 15 percent (with 12.7 percent in rural areas and 24.5 percent in urban areas). The overall *awareness but not using it* is 47.0 percent. A major segment of the customers deliberately neglect to use Green channel / Green Pin as they fear the risk of errors in using it. There is scope for capacity building in this area.

OBJECTIVE 5: ROLE OF SOCIAL MARKETING IN CREATING A POSITIVE ENVIRONMENT TOWARDS DIGITAL AND CASHLESS BANKING

Based upon the findings of the fieldwork related to the current perception of common mass towards digitalization, identification of key persons in a family who conducts digital transactions, identifying the impending barriers in inculcating a culture of digital and cashless banking and the present status with respect to penetration of digital transaction in the daily life of the urban and rural masses, several advertisement themes has been identified as well as developed and relevant advertisement copy has been developed for each theme as selected. The themes are both in English and Assamese versions as below. This has been shown in Chapter 7, Table 7.1.

OBJECTIVE 6: ROLE OF SHG'S FOR PROMOTING CASHLESS BANKING TO THE ILLITERATES IN THE RURAL AREAS AND BUILDING MECHANISM FOR THE SAME.

A suggestive model is proposed for the promotion of digital movement in the state of Assam. The model comprises of four entities. They are the Banks, the Self Help Groups, the Training Institutes and the Target Beneficiaries as shown in Figure 8.1.

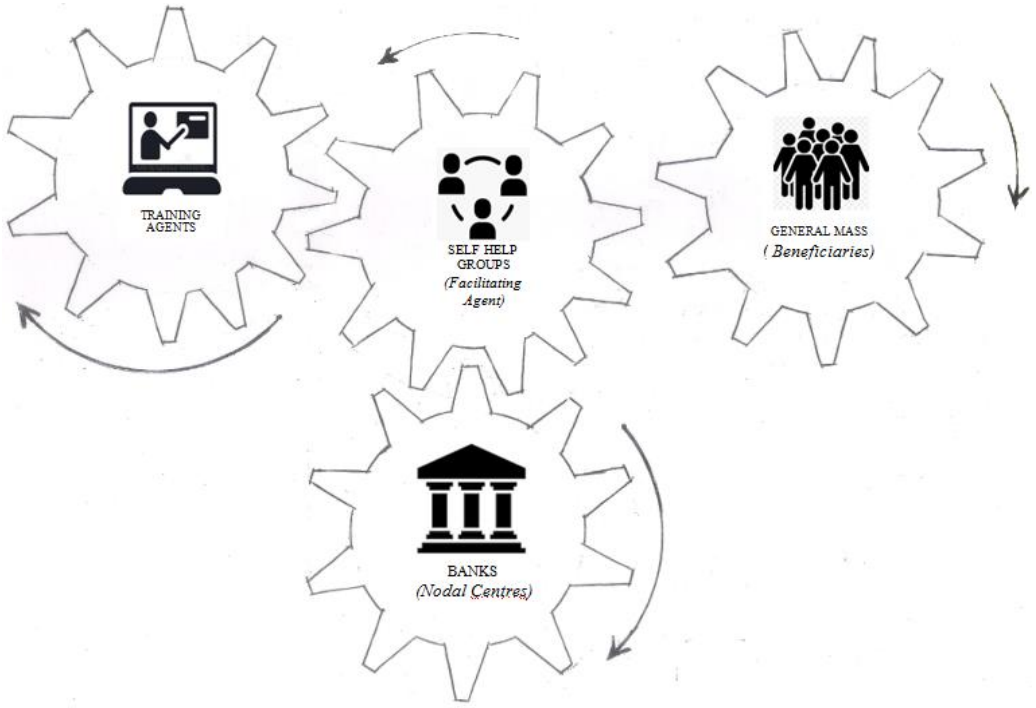


FIGURE 8.1: A MODEL FOR CAPACITY BUILDING TOWARDS DIGITALISATION

The primary goal of the Model is to create effective linkage of the mentioned four entities so as to educate the SHGs and the common mass in the aspect of financial literacy and processes related to availing digital products and services.

9.2 Recommendations

Table 9. 1: Checklist of penetration of different digital transactions

TYPE OF TRANSACTIONS	*OVERALL*	*RURAL*	*URBAN*
Online Payment of Mobile Phone Bill	MEDIUM	MEDIUM	MEDIUM
Online Payment of Electricity Bill	LOW	LOW	MEDIUM
Online Payment of Property Tax Bill	LOW	LOW	LOW
Booking of LPG Gas online / sms mode	MEDIUM	MEDIUM	MEDIUM
Online Payment for LPG Gas refilling	LOW	LOW	LOW
Online Net Banking/Mobile Banking	MEDIUM	MEDIUM	HIGH
Cashless (Debit Card /Card/Paytm) Payment	MEDIUM	MEDIUM	HIGH
Buying goods / services online	HIGH	MEDIUM	HIGH
Transactions through Cash on Delivery mode	HIGH	MEDIUM	HIGH

Benchmarking of High-Medium –Low Penetration given as per Table 10.1 in Appendix

9.2.1 Action for increasing penetration based on Table 10.1

	TYPE OF TRANSACTIONS	ACTION REQUIRED / TOOLS
1	Online Payment of Mobile Phone Bill	Create more awareness, holding Workshops and Consumer Awareness Program by mobile phone companies as part of CSR activities, increase the cash back offers to motivate, engagement of SHG's in the rural areas for capacity building, holding live demonstrations in social and cultural platforms
2	Online Payment of Electricity Bill	Create more awareness through consumer awareness programs by the Electricity company as part of CSR activities, technical issues related to bill payment non updation needs to be sorted out
3	Online Payment of Property Tax Bill	Create more awareness through consumer awareness programs by the respective local Municipality Corporation as part of CSR activities, engagement of SHG's in rural areas
4	Booking of LPG Gas online / sms mode	Create more awareness, rural as thrust area, instructing distributors to promote online booking, face to face advice, attaching condition that subsidy will be credited to bank account provided online payment is made
5	Online Payment for LPG Gas refilling	Issue instruction to the LPG Distributor to promote online payment for refilling, formulating schemes for the rehabilitation of the delivery man, attaching condition that subsidy will be credited to bank account provided online payment is made
6	Online Net Banking/	Need for organizing customer awareness programs by banks on

	Mobile Banking	online banking, educating customers on the do's and do not's of net banking / mobile banking to boost confidence on its use, making helpline numbers very receptive, engagement of SHG's in the rural areas for capacity building, targeting students of educational institutions to promote at respective homes
7	Cashless (Debit Card /Card/Paytm) Payment	Confidence building measures, educating on the do's and do not's of net banking / mobile banking, engagement of SHG's in the rural areas for capacity building
8	Buying goods / Services Online	Engagement of SHG's in the rural areas, for urban areas holding periodic Customers Awareness Meets on the do's and do not's in conducting online transactions
9	Transactions through Cash on Delivery Mode	Engagement of SHG's in the rural areas, for urban areas no action is required

Table 9. 2: Checklist of status of awareness and use of digital products / services

		OVERALL	***RURAL***	***URBAN***
1	Debit cards/ Micro ATM	High	High	High
2	Credit Cards	Low	Low	Medium
3	Mobile Banking (USSD/ UPI)/	Medium	Medium	Medium
4	NEFT (National Electronic Fund Transfer)	Low	Low	Medium
5	RTGS (Real Time Gross Settlement)	Low	Low	Low
6	ECS (Electronic Clearing System)	Low	Low	Low
7	IMPS (Immediate Payment Service)	Low	Low	Low
8	AEPS (Aadhar Enabled Payment System)	Low	Low	Low
9	E wallets / Mobile Wallets	Medium	Low	Medium
10	Bank Prepaid Cards	Low	Low	Low
11	Digishala	Low	Low	Low
12	Green Channel / Green Pin	Low	Low	Low

Benchmarking of High-Medium –Low Penetration given as per Table 10.2 in Appendix

9.2.2 Action for increasing penetration based on Table 9.2

Sl no	PRODUCT	**ACTION REQUIRED**
1	ATM / Debit Cards/ Micro ATM	Overall no major action is required, holding Customers Awareness Meets on the do's and do not's of using ATM / Debit Cards to reeducate from time to time periodically
2	Credit Cards	Research required to make the product more customer friendly, create more awareness through advertisements to make the due amount of credit cards on time, motivating banks to promote credit cards by outsourcing the task of accessing credit worthiness of customers to third parties
3	Mobile Banking	Policy issues are involved, requires promotional offers, hold customers awareness meets for confidence building against misconceptions on online frauds, remove skepticism on the utility of the service by live demonstration through social and cultural platforms
4	NEFT	Research required to make the product more customer friendly, educate customers on the registration process for availing NEFT, make the specific software /portal for its use user friendly by including provisions of error checks / balances through checker verifier concepts.
5	RTGS	Research required to make the product more customer friendly, the policy of allocating limit for RTGS transaction may be reworked, policies related to regulate RTGS transaction may be made more flexible, need for creating awareness through advertisement for the unreached
6	ECS	Research required to evaluate policy issues are involved in rural operation, requirement of more empanelment of remote area banks under the Bank's mapping for inclusive growth, there is a need for creating awareness in rural areas
7	IMPS	Research required to evaluate policy issues, need for creating awareness of IMPS in general, scope to rework on the amount of transaction fee charged to make it more acceptable, educate on the mandatory seven digit Mobile Money Identifier (MMID) number that is required for IMPS and holding customers meet for spreading awareness on the process of its usage
8	AEPS	Policy issues are involved, further research required to make the product more customer friendly, need to solve technical issues in remote areas related to transaction failure, process of lodging complains in case of transaction failure needs to be streamlined, policy issues are involved as *Adhaar Cards* is still not mandatory in this part of the country, create awareness of DigiShala to promote AEPS, role of SHG's to promote it in the rural areas may be stressed.
9	E wallets /	There is a need for creating awareness, product may be made more

	Mobile wallets	customer friendly to be accessible by the general mass, special role of SHG's to promote it in the rural areas may be stressed.
10	Bank Prepaid Cards	Policy issues are involved, requirement of institution of some nominal protection by bank for card holders if it is to be promoted, procedural process of availing Prepaid Cards may be made more user friendly.
11	Digishala	Need for creating mass awareness by organizing customer awareness meets on the DigiShala Service, need for engagement of SHGs for capacity building in the rural areas, to educate people on the use of DigiShala, master trainers may be used. Such master trainers may be selected and properly trained at designated Nodal Centres and then deputed for imparting trainings in respective districts.
12	Green Channel (SBI) / Green Pin	Need for creating mass awareness by organizing customer awareness meets on the use of Green Channel (SBI) / Green Pin by live demonstrations. Stress on the need to use Green Channel (SBI) / Green Pin as a part of the Green Marketing drive to save paper and the planet and sustain the future generation. Customers may be educated by direct face to face interaction, role of SHG's in rural areas.

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APPENDIX

QUESTIONNAIRE

DEMOGRAPHIC PROFILE:

1) District:_____(Rural/Urban)
   Village name/ Circle/ Block:_____

2) Age: 18-25 ☐ 26-35 ☐ 36-45 ☐ 46-55 ☐ 56-60 ☐ Above 60 ☐

3) Education:
   Primary /uneducated ☐ HSLC / HSSLC ☐ Graduate ☐ Postgraduate and above ☐

4) Income Level (pa):
   Less than 50000 ☐ 50001-1 lakhs ☐ above 1 lakh -5lakhs ☐ Above 5 lakhs ☐

5) Occupation:
   Public Sector/ Government ☐ Private Sector ☐ Self employed ☐ Professional ☐
   Unemployed/housewife/student ☐

6) Indicate your degree of agreement or disagreement on the following statements related to the country's move towards digitalization and cashless economy mentioned below with appropriate ratings, where 3 is Agree, 2 is Neither Agree nor Disagree and 1 is Disagree.

Sl no	Statements	Ratings
		3- 2-1
(i)	Digital banking is meant for tech savvy people	□ □ □
(ii)	Digital and Cashless economy will be very convenient for all as it is anytime anywhere banking	□ □ □
(iii)	Digital and Cashless economy will help reduce the risk of holding cash	□ □ □
(iv)	Cashless transactions have technology related issues	□ □ □
(v)	Cashless transactions are a more secure way of transacting	□ □ □
(vi)	Banks should discourage branch visits to encourage digital transactions	□ □ □
(vii)	I would feel comfortable doing cashless transactions	□ □ □
(viii)	Digital transactions help me avail various discounts /offers	□ □ □
(ix)	Digitalization will lead to overall progress and development of the country	□ □ □

7) Name the persons in your family who is Android phone savvy/ Tech savvy

   (i) Husband (ii) Wife (iii) Children (iv) Elderly persons (v) Any other (vi) None

8) Name the persons in your family who makes online purchases

(i) Husband (ii) Wife (iii) Children (iv) Elderly persons (v) Any other (vi) None

9) Indicate your degree of agreement or disagreement on the following statements related to your feeling on the impending barriers in inculcating a culture of digital and cashless banking with appropriate ratings, where 3 is Agree, 2 is Neither Agree nor Disagree and 1 is Disagree.

Sl no	Statements	Ratings
		3- 2-1
1	Digital transactions are very complicated and full of hassles	□ □ □
2	In digital transactions, there is perceived risk of fraud	□ □ □
3	A culture of digital and cashless banking is missing	□ □ □
4	People are not aware of all the digital products which are available and its usage	□ □ □
5	There is a risk of committing errors and losing money	□ □ □
6	The processes involved in conducting digital transactions are not easy to understand	□ □ □
7	It is a technical subject and beyond the comprehension of common masses	□ □ □
8	Electricity and Internet connectivity issues are involved	□ □ □
9	Impending barriers retard the growth and progress of overall digitalization of the country.	□ □ □

10) Do you have?
   i. Jan Dhan A/c : Yes /No Mention Bank names:_____
   ii. Savings Bank A/c: Yes /No Mention Bank names:_____
   iii. Adhaar Card: Yes /No
   iv. Mobile Phone: Yes /No Feature Phone/ Smart Phone

11) How do you avail banking services:
   i. By visiting the bank : Yes /No
   ii. By availing door to door services of banking correspondent/ agents: Yes /No
   iii. By online services through mobile phone/computers: Yes /No

12) Below is a list of transactions that are required to be done in our day to day life. Please use tick mark for the right answer related to your mode of payment.

Sl no	Statements	Answer	
		Yes	No
1	Do you make online payment of your Mobile Phone Bill?		
2	Do you make online payment of your Electricity Bill?		
3	Do you make online payment of your Property Tax Bill?		

4	Do you book your LPG Gas online?		
5	Do you make online payment for LPG Gas refilling?		
6	Do you avail online Net Banking/Mobile Banking facility?		
7	Do you make cashless (Debit Card /Card/Paytm) payment for your purchases in the market?		
8	Do you buy goods / services online?		
9	Do you do transactions through Cash on Delivery mode?		

Q13. Below is a list of digital products that are available as on date. Please use tick mark for the right answer on your awareness and usage.

Sl no	Product	Are you aware of it		Have you used it	
		Yes	No	Yes	No
1	ATM/ Debit cards/ Micro ATM				
2	Credit Cards				
3	Mobile Banking (USSD/ UPI)/				
4	NEFT (National Electronic Fund Transfer)				
5	RTGS (Real Time Gross Settlement)				
6	ECS (Electronic Clearing System)				
7	IMPS (Immediate Payment Service)				
8	AEPS(Aadhaar enabled payment system)				
9	E wallets/ Mobile wallets				
10	Bank Prepaid Cards				
11	Digishala				
12	Green channel (SBI) / Green Pin				

কুৱেচনাৰ

(ASSAMESE QUESTIONNAIRE)

তলৰ দিয়া প্ৰশ্নসমূহৰ উপযুক্ত উত্তৰত ✓ চিন দিয়ক।

১। আপোনাৰ জিলা ঃ

☐ কামৰূপ ☐ গোৱালপাৰা ☐ বৰপেটা ☐ নলবাৰী ☐ শোণিতপুৰ
☐ তিনিচুকীয়া ☐ যোৰহাট ☐ নগাঁও ☐ ৰঙাইগাঁও ☐ কোক্ৰাঝাৰ

২। আপোনাৰ অঞ্চল ঃ ☐ গ্ৰামীণ ☐ পৌৰ

৩। আপোনাৰ বয়স ঃ ☐ ১৮-২৫ ☐ ২৬-৩৫ ☐ ৩৬-৪৫ ☐ ৪৬-৫৫ ☐ ৫৬-৬০ ☐ ৬০ৰ ওপৰত

৪। আপোনাৰ শিক্ষা ঃ ☐ অশিক্ষিত ☐ মেট্ৰিক/হায়াৰ ছেকেণ্ডাৰী ☐ স্নাতক ☐ স্নাতকোত্তৰ

৫। আপোনাৰ বছৰি উপাৰ্জন ঃ

☐ ৫০০০০তলত ☐ ৫০০০১ৰ পৰা ১লাখ ☐ ১০০০০১ ৰ পৰা ৫ লাখ ☐ ৫০০০০১ৰ ওপৰত

আপোনাৰ বৃত্তি ঃ ☐ চৰকাৰী চাকৰি ☐ ব্যক্তিগত চাকৰি ☐ নিজা ব্যৱসায় ☐ নিবনুৱা/গৃহিনী/ছাত্ৰ

৬। তলত দিয়া উক্তিবোৰৰ ওপৰত (দেশৰ প্ৰতিচ্ছবিকৰণ আঁচনিৰ দৃষ্টিত) আপুনি কিমান পৰিমাণে সন্মত, আপোনাৰ উত্তৰত ☑ দিয়ক (য'ত ১= কেতিয়াও সন্মত নহয়; ২ =সপক্ষেও নহয় বিপক্ষেও নহয়; ৩ =সদায় সন্মত হয়।)

	উক্তি	মতামতৰ হাৰ		
		৩	২	১
১	ডিজিটেল বেংকিং বা কম্পিউটাৰৰ দ্বাৰা লেনদেন প্ৰযুক্তিৰ জ্ঞান থকা মানুহৰ বাবেহে উপযুক্ত			
২	ডিজিটেল বা সংগণকীয় আৰু নগদধনবিহীন অৰ্থনীতি সকলোৰে বাবে সূচল, কিয়নো ইয়াৰ দ্বাৰা য'তে ত'তে যিকোনো সময়তে বেংকিং সম্পৰ্কীয় কাম-কাজ কৰিব পাৰি।			
৩	ডিজিটেল বা সংগণকীয় আৰু নগদ ধন বিহীন অৰ্থনীতিয়ে নগদধন ৰখাৰ বিপদ হ্ৰাস কৰিব।			
৪	নগদধনবিহীন লেনদেনৰ প্ৰযুক্তি জড়িত সমস্যা আছে বা থাকে			
৫	নগদধনবিহীন লেনদেনৰ এটা অধিক নিৰ্ভৰযোগ্য উপায়			
৬	ডিজিটেল বা সংযোগীয় লেনদেন জনপ্ৰিয় কৰিবলৈ বেংকবিলাকে (মানুহক) বেংকৰ শাখালৈ আহিবলৈ উৎসাহ দিব নালাগে			
৭	মই নগদধনবিহীন লেনদেন কৰি আৰাম পাও			
৮	বিভিন্ন ৰেহাই/সা-সুবিধা পাবলৈ নগদ ধনবিহীন লেনদেনে মোক সহায় কৰে			
৯	ডিজিটেলাইজেচন বা সংগণকীকৰণ দেশত সৰ্বাত্মক উন্নতি আৰু বিকাশ ত্বৰান্বিত কৰিব			

৭। আপোনাৰ পৰিয়ালত কোনে বেছিকৈ এণ্ডৰইড মোবাইল ব্যৱহাৰ কৰে ?

☐ স্বামী ☐ স্ত্ৰী ☐ সন্তান ☐ বয়োজ্যেষ্ঠ লোক ☐ অন্যান্য

৮। আপোনাৰ পৰিয়ালত কোনে ইণ্টাৰনেট মাধ্যমৰ যোগেদি শোধন বা আদায় কৰে?

☐ স্বামী ☐ স্ত্রী ☐ সন্তান ☐ বয়োজ্যেষ্ঠ লোক ☐ অন্যান্য

৯। তলত দিয়া উক্তিবোৰৰ ওপৰত (দেশৰ প্রতিচ্ছবিকৰণ আঁচনিৰ দৃষ্টিত) বাধা প্রদান কৰা বুলি আপুনি কিমান পৰিমাণে সন্মত, আপোনাৰ উত্তৰত ☑ দিয়ক (য'ত ১= কেতিয়াও সন্মত নহয়; ২ = সপক্ষেও নহয় বিপক্ষেও নহয়; ৩ = সদায় সন্মত হয়।)

	উক্তি	মতামতৰ হাৰ		
		৩	২	১
১	ডিজিটেল সংগণকীয় লেনদেন বিলাক বৰ জটিল আৰু বাধাৰে পৰিপূর্ণ			
২	ডিজিটেল বা সংগণকীয় লেনদেনত ফাংফুং আৰু ঠগ প্রৱঞ্চকৰ সুবিধা থকা বুলি ভাব হয়			
৩	ডিজিটেল বা সংগঠনীয় আৰু নগদধনবিহীন বেংকিঙৰ সংস্কৃতি (আমাৰ দেশত) নাই			
৪	উপলব্ধ ডিজিটেল বা সংগণকীয় সেৱা আৰু সা-সুবিধা তথা আৰু ব্যৱহাৰ সম্পর্কে মানুহে নাজানে বা সচেতনতা নহয়			
৫	(ডিজিটেল লেনদেনত) ভুল হোৱাৰ আৰু পইচা হেৰুউৱাৰ সম্ভাৱনা আছে			
৬	এইটো এটা প্রযুক্তি জড়িত বিষয় আৰু ই সাৱধান মানুহৰ বোধক্ষমতাৰ বাহিৰৰ বিষয়			
৭	ডিজিটেল বা সংগণকীয় লেনদেনৰ প্রক্রিয়াটো বুজিবলৈ সহজ নহয়			
৮	(ইয়াত) বিদ্যুৎ আৰু ইণ্টাৰনেটৰ যোগাযোগ সংক্রান্তীয় সমস্যা আছে			
৯	দেশৰ সর্বাত্মক ডিজিটেল বা সংগণকীয় প্রক্রিয়াৰ বিকাশ প্রযোজ্য বাধা বা হেঙাৰবোৰে মন্থৰ কৰিব পাৰে			

১০। তলত দিয়া সুবিধাসমূহ আপোনাৰ আছেনে ?

ক) জন ধন বেংক একাউণ্ট ☐ আছে ☐ নাই বেংকৰ নাম উল্লেখ কৰক _____

খ) চেভিংছ বেংক একাউণ্ট ☐ আছে ☐ নাই বেংকৰ নাম উল্লেখ কৰক _____

গ) আধাৰ কার্ড ☐ আছে ☐ নাই

ঘ) মবাইল ফোন ☐ আছে ☐ নাই ফিচাৰ ফোন/স্মার্ট ফোন _____

১১। আপুনি বেংকৰ সেৱা কেনেকৈ উপভোগ কৰে?

ক) ব্যক্তিগতভাৱে বেংকত গৈ। ☐ হয় ☐ নহয়

খ) বেংক সেৱকে আগবঢ়োৱা ঘৰুৱা সেৱা ☐ হয় ☐ নহয়

গ) অনলাইন সেৱা মোবাইল ফোন বা কম্পিউটাৰৰ জৰিয়তে ☐ হয় ☐ নহয়

১২। তলত দিয়া দৈনন্দিন জীৱনত কৰা কিছুমান লেনদেনৰ প্ৰশ্নত তালিকা আছে। আপুনি কি ধৰণে পৰিশোধ কৰে, আপোনাৰ উত্তৰত ☑দিয়ক।

		হয়	নহয়
ক)	আপোনাৰ মোবাইল ফোন বিল অনলাইন মাধ্যমত পৰিশোধ কৰে নে?		
খ)	আপোনাৰ ঘৰৰ বিজুলী বিল অনলাইন মাধ্যমত পৰিশোধ কৰে নে?		
গ)	আপোনাৰ সম্পত্তি কৰ অনলাইন মাধ্যমত পৰিশোধ কৰে নে?		
ঘ)	আপোনাৰ ৰন্ধন গেছ অনলাইন আৱক্ষণ কৰেনে?		
ঙ)	আপোনাৰ ৰন্ধন গেছত পুনৰ ভৰ্তিকৰণত অনলাইন পৰিশোধন কৰেনে?		
চ)	আপুনি বেংক সেৱা ইণ্টাৰফেট বেংকিঙৰ বা মোবাইল ফোনৰ সহায়ত ভোগ কৰেনে ?		
ছ)	আপুনি আপোনাৰ লেনদেন পৰিশোধ কৰিবলৈ এটিএম কার্ড বা পেটিএম ব্যৱহাৰ কৰেনে?		
জ)	আপুনি অনলাইন বা নেট যোগে বস্তু কিনোতে বা সেৱা লওতে পৰিশোধ কৰেনে?		
ঝ)	আপুনি বস্তু কিনোতে প্ৰদানৰ বিনিময়ত নগদ ধন দিয়ে নেকি?		

১৩। তলত কিছুমান বৰ্তমান যুগৰ প্ৰতিচ্ছবিকৰণ জড়িত সা-সুবিধাৰ তালিকা আছে। প্ৰতিটো বস্তুৰ বিষয়ে আপুনি অৱগত হয় নে নহয় আৰু ব্যৱহাৰ কৰে নে নকৰে, আপোনাৰ উত্তৰত ☑দিয়ক।

	প্ৰতিচ্ছবিকৰণত জড়িত সা-সুবিধা সমূহ	আপুনি অৱগত		আপুনি ব্যৱহাৰ	
		হয়	নহয়	কৰো	নকৰো
ক	এ.টি.এম/ ডেবিট কার্ড/মাইক্ৰ এ.টি.এম				
খ	ক্ৰেডিট কার্ড				
গ	মোবাইল বেংকিং (ইউ.এচ.এচ.দি/ইউ.পি.আই)				
ঘ	এন.ই.এফ.টি (নেচনেল ইলেকট্ৰনিক ফাণ্ড ট্ৰেন্সফাৰ)				
ঙ	আৰ.টি.জি.এচ (ৰিয়েল টাইম গ্ৰচত চেটেলমেণ্ট)				
চ	ই.চি.এচ (ইলেকট্ৰনিক ক্লিয়াৰিং চিস্তেম)				
ছ	আই.এম.পি.এচ (ইমিডিয়েট পেমেণ্ট ছার্ভিচ)				
জ	এ.ই.পি.এচ (আধাৰ এনেবেল পেমেণ্ট চিষ্টেম)				
ঝ	ই-ৱালেট/ মোবাইল ৱালেট				
ঞ	বেংক প্ৰিপেইড কার্ড				
ট	দিজিছালা				
ঠ	গ্ৰীন চেনেল (এছ. বি. আই)				

Benchmarking of High-Medium-Low Penetration for Table 10.1

Highest percentage of penetration recorded as per Table 6.3= 84.40
Lowest percentage of penetration recorded as per Table 6.3 =24.20
Difference (highest percentage – lowest percentage)/3=60.20/3=20.07 %

Coding Criteria:

Low= Percentage below (24.20+20.07)=44.26%
Medium= Percentage between Low and 64.34% (44.26+20.07)
High= Percentage above 64.34%

Benchmarking of High-Medium-Low Penetration for Table 10.2

Highest percentage of penetration recorded as per Table 6.4= 83.60
Lowest percentage of penetration recorded as per Table 6.4 = 08.20
Difference (highest percentage – lowest percentage)/3=75.40/3=25.13%

Coding Criteria:

Low= Percentage below (08.20+25.13)=33.33%
Medium= Percentage between Low and 58.46% (33.33+25.13)
High= Percentage above 58.46%