

# “CONSUMERS BEHAVIOUR TOWARDS MOBILE BANKING APPLICATIONS”

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## ABSTRACT

Technology has dramatically transformed banking system in India. As banks have been incorporating new technologies to reduce cost, enhance efficiency, productivity and customer convenience. Technology - intensive delivery channels like, net banking, ATMs, mobile banking, etc. have created a continuous winning situation by extending great convenience and multiple options for customers while providing tremendous cost advantages to banks. Banking sectors have initiated new technologies, particularly in rural areas with the focus of Digital Inclusion. A large number of people are now shifting towards electronic payments, prompting others to learn, to transact the cashless way at a faster pace than ever before. The positive impact of technology inclusion is clearly visible now in almost all areas of banking operations, especially in retail and payment systems in the country. But there exist a digital divide between rural and urban in adopting banking technology. Despite of the efforts of banks and government, there has not been much response by the people to adopt banking technology in the rural areas. This paper aims to study consumer awareness and adoption of Technology in banking by the rural people, which is expected to serve as a means of inclusive growth and also aims to identify the factors hampering the rural people to adapt the banking technology. The implications for banks will be that, it will help banks to know the awareness and adoption level of their digital channels among their customers.

**Key Words: Banking, Technology, Consumer Perception, Awareness, Adoption**

## 2. INTRODUCTION

During the last decade, technology has been dramatically transformed banking in India driven by the challenges of competition and rising customer expectations. Due to the shrinking margins, banks have been using technology to reduce cost and enhance efficiency, productivity and customer convenience. The notable challenge that has taken place in the banking environment of the country is the introduction of "Universal Banking" and "Digital Banking".

Technology - intensive delivery channels like, net banking, ATMs, mobile banking applications, etc. have created a continuous winning situation by extending great convenience and multiple options for customers while providing tremendous cost advantages to banks.

Today, many banks have started following universal banking model, and digitization which has opened up new avenues of growth for them and are offering different services to the customers. Mobile banking applications are one such service offered by banks in order to make people self-dependent and become tech savvy. Banks are increasingly

providing new mobile payment services, by enabling the mobile web and mobile app channels for online banking transactions. But In country like India, there exist a digital divide between rural and urban in adopting such technology. The advancement in technology is utilized only by certain section of people. Rural people still stay backward. Rural areas are equally important as their urban counterparts since the majority of the Indian population living in rural regions of the country. The awareness and adoption rate of banking technology services among the rural customers is still found very low. There still exists a situation where there is no proper banking facilities and usage of outdated technology. The people of rural areas suffer due to lack of proper guidelines from banks regarding various government schemes and digital literacy. Hence extension of banking facility into remote areas i.e. by extending the banking facilitates banks can help self-employed rural people to meet their working capital needs. Thus technology inclusion in rural area will be ultimately a win-win situation. Our research focuses to study various mobile banking applications and the level of awareness and the customer's perception in adopting the mobile banking application and also factors hindering them to adopt such technology.

### 3. SELF SERVICE TECHNOLOGY

Banking service has gone through a positive technological change, and achieves higher efficiency, control of operations, productivity and profitability. Banks have started following digitization which has opened up new avenues of growth for them and are also offering different services to the customers, SST is one such services offered by banks in order to make people self-dependent and become tech savvy. SSTs are technological support or interfaces through which customers can access the services without the help of the service providers or service employees. Self service Technology - concentrated delivery channels have created a continuous winning situation by extending great convenience and multiple options for customers .

Digital village schemes Internet based services, biometric automated teller machines (ATMs), and mobile banking applications promote people to adopt technology and help them in becoming tech savvy. Extensions of banking facility into remote areas are facilitating self-employed rural people to meet their working capital needs. Thus technology inclusion in rural area is becoming be ultimately a win-win situation

#### 3.1. RECENT TREND IN SELF SERVICE TECHNOLOGY IN INDIA

##### ✓ Biometric ATM

Biometric ATMs is self-service automated teller machines (ATMs), or cash machines, that use a biometric measure(thumb impression) to identify customers and allow them to withdraw cash.The introduction of biometric ATMs is mainly focus on rural customers, pensioners and others using thumb impression for bank-related activities. Since it accepts both password and thumb impression to identify the customers, any customer (biometric user as well as non-biometric user) can use the ATM. IN simple word it can be described as a “card-less and PIN-less” ATM The bank has proposed to introduce many more biometric ATMs in rural areas in tune with its financial inclusion initiative. State Bank of India, Mr. O.P. Bhatt, has inaugurated the first biometric ATM of the group in the country at Munnar in Kerala, Punjab

National Bank has taken the initiative to install North India's first biometric ATM at the Chhapraula village Branch of District Gautam Budh Nagar.

### ✓ **Contactless Payment**

Contactless payment means payments made without the need to swipe or insert your card in a point of sales (POS) machine. Payments can be made by just waving the phone at a POS terminal. Broadly, there are three kinds of technologies that allow you to do this.

- Near-field communications taps or wave your card at a POS terminal, which is NFC compliant. A working example of this in India is State Bank of India's NFC-compliant Tap & Go Debit Card
- Host Card Emulation also called HCE, this technology works with the *Android* mobile operating system. It allows converting the physical card, such as a debit or credit card, into a virtual card on the Android phone. An example of HCE is ICICI Bank's contactless payment option on its Pockets app.
- Magnetic Secure Transmission (MST) technology works by emitting a magnetic signal from the mobile device. This magnetic signal can be read by the magnetic strip card reader on a traditional POS terminal. As a result, most merchants would not have to invest in new hardware, as their existing POS terminals would be compliant with this contactless technology.

### ✓ **Mobile Banking Applications**

Online banking refers to any banking transaction that can be conducted over the internet, generally through a bank's website under a private profile, and with a desktop or laptop computer. These transactions include services traditionally offered at local branches without having to go to one. Mobile banking allows you to perform many of the same activities as online banking using a smartphones or tablet instead of a desktop computer. Mobile banking's versatility includes: Logging into a bank's mobile website, Using a mobile banking app, Text message (SMS) banking.

### ✓ **Digital Village:**

The bank has conceived the concept of Digital Village so as to empower Rural India to connect digitally and avail the benefits of financial inclusion as there was good response from the Villages. Vijaya Bank has dedicated itself to integrate Financial Inclusion with Digital India. The aim is to enable villagers to use technology for banking, payments, Financial Inclusion etc. Bank's initiative is not only to provide the Cashless Banking Service to every villager but also to ensure use of technology in every sphere of life. The digital village is multidimensional and primarily to enhance access to the banking and provide seamless Banking Services. The bank has provided High Speed Broadband Connectivity throughout the village via Wi-Fi using a Wi-Fi Tower. The Bank has already provided technology-enabled Banking Services to the villagers, including statements, remittances, mobile recharge, DTH recharge and fund transfers on the mobile phone. All the villagers' accounts are linked to Aadhaar to enable direct transfer of Government benefits into Saving Accounts

## Initiatives of Banks

- Bank accounts of all residents of the Villagers have been opened under PMJDYschmes and were also issued Rupay Debit Cards and enabled PMJDY Overdraft facility through ATM for all eligible family members of the Village.
- Mobile Banking registration through ATM was enabled
- Villagers with non-feature phones have been provided with \*99# (NUUP based Mobile Banking service).
- Kisan Credit Card issued to the villagers can be used through ATM/MicroATM thus expanding the scope of KCC.

In an effort to empower rural India with tech intervention, ICICI Bank has digitized 100 villages in 100 days, and dedicated this achievement to the nation. The ICICI Digital Villages initiatives take a three-pronged approach to implementation of digitization in rural India.

- In the first phase, the bank eases access to online banking. An Aadhaar-based e-KYC method is implemented to help villagers open accounts without any physical documents
- The second phase comprises vocational training under its 'ICICI Academy for Skills – Rural Initiative' programme. The training is offered free-of-cost and is conventionally held over 15-30 days
- The bank encourages villagers to form self-help groups and joint liability groups, and then offers loans to the members. The facilities are also extended in the form of Kisan credit cards, gold and farm equipment loans

## 4. MOBILE BANKING APPLICATION AND RURAL INDIA

Mobile banking applications are enjoying tremendous growth in India. According to Unnithan and Swatman (2001) mobile phones have become a significant communication tool for every person throughout the world. The service of mobile banking applications is being directed from metropolitan cities to urban areas and then now to the rural areas. The effectiveness and popularity of mobile banking applications mainly rely on the banking system in India and their connection with supporting and regulatory system. Indian banks are taking initiative and also encouraging the rural people to register and use the services of mobile banking. Customers are also adopting the mobile banking services and customers are also getting lots of benefits Nowadays rural customers are availing the mobile money facilities without the bank accounts. Money is stored in the upgraded mobile phone under the system of mobile money, but it does not earn the interest rate of saving account in the bank. Mobile money acts as an innovative tool for the inclusive financial services, particularly in rural areas. Reserve bank of India framed the formal guidelines for the mobile banking. The awareness of people, security guidelines of the reserve bank of India (RBI) and efforts of banks will shape the framework for the Indian mobile banking and also will encourage rural people to come forward in adopting such technology, which will make them tech savvy. All these efforts will surely make the path for successful mobile banking in the rural India (Gupta and Mittal)

“Banks are permitted to offer mobile banking services (through SMS, USSD or mobile banking application) after obtaining necessary permission from the Department of Payment & Settlement Systems, Reserve Bank of India. Mobile Banking services are to be made available to bank customers irrespective of the mobile network,” the Master Circular said. According to the Circular, banks which are licensed, supervised and having a physical presence in India, are permitted to offer mobile banking services. Only banks who have implemented core banking solutions are permitted to provide mobile banking services. The services shall be restricted only to customers of banks and/or holders of debit/credit cards issued as per the extant Reserve Bank of India guidelines. “Only Indian Rupee based domestic services shall be provided. Use of mobile banks services for cross border inward and outward transfers are strictly prohibited. Banks may also use the services of Business Correspondent appointed in compliance with RBI guidelines, for extending this facility to their customers. Banks should strive to provide options for easy registration for mobile banking services to their customers, through multiple channels, thus minimizing the need for the customer to visit the branch for such services.

## 6. STATEMENT OF THE PROBLEM

The role of technology enabled self services in today’s cashless world has brought about a foremost change in the activities of the customers. Technology enabled self services facilitate the customer to enjoy the service they require with a more flexible choice and increased efficiency and effectiveness of service providers (Pampallis&bond, 2000). Since the bank aims to move towards global standards, the provision of alternative delivery channels like biometric ATMs, contactless payments, low cost bill payment system, and mobile banking applications has become routine in banks. Urban population is very well versed with technologies. But, due to Lack of digital literacy and awareness, rural customers lag behind the usage of various technological services provided by the banks. Hence, in order to increase the rural customer base for greater use of technology related banking services, it is imperative to understand the customer awareness and their perception in adopting the technology based services and the factors which hamper them in adopting technology based banking services

## 7. LITERATURE REVIEW

### 7. 1. INTERNATIONAL REVIEWS

**Gianni Fenua, Pier Luigi Paua (2015)<sup>1</sup>** highlighted the services for off-branch banking Italian banks were analyzed, found out that that mobile apps have surpassed the mobile web channel in the completeness of the offer, due to the fact that additional capabilities of mobile devices make possible advanced features and applications. An outlook on the near future was provided, remarking that mobile marketing and mobile recommender systems can greatly take advantage of being run natively on devices, making it desirable for businesses to invest on designing mobile apps. **Adewoye., (2013)<sup>2</sup>** in his study entitled “Impact of Mobile Banking on Service Delivery in the Nigerian Commercial Banks”, analyzed that the impact of mobile banking on service delivery in the Nigerian commercial banks. Found out that Mobile banking improves bank's service delivery in a form of transnational convenience, savings of time, quick transaction alert and reduced service cost which have recuperated customer relationship and satisfaction. To this end, it was also recommended that the managements of banks should create awareness to inform the public about the benefits derived from the e-banking service products. Collaboration among banks should perfectly maintain skilled manpower. Computer wizards



should be employed by every bank, in order to prevent fraudulent personnel and hackers from manipulating the bank's data and to prevent thieves stealing money from the bank accounts. Finally, provision and maintenance of the public network system such as telephone facilities are basic infrastructures to the efficient functioning of the mobile banking services. **Sultan, Abdulrazza (2017)<sup>3</sup>**, analyzed the most well-known and accepted TAM models to provide a comprehensive understanding of their impacts toward the adoption of mobile banking applications. Further, this study also explored on the most effected factors that have been used to influence the adoption behavior of mobile banking applications.

## 7.2. NATIONAL REVIEWS

**Agrahari, Chandra (2017)<sup>1</sup>** studied about the usage of mobile banking applications in various sectors of the society and identified that for different mobile banking applications maximum users are private employees and then students. It was also identified that Paytm has maximum users then free charge. **Rana & Singh (2017)<sup>2</sup>** studied about the consumer perception of digital payment and positive impact on.. It was found that demographic factor except education does not have much impact on the adoption of the digital payment. And it was also found out that there was no significant difference is perceived by the respondents on the basis of gender, age, profession and annual income. The study indicated that person has studied beyond matriculation and internet savvy, he or she will be inclined to use the digital payment mode. It was also found that in the areas/region where education level is high such as Delhi NCR and other metropolitan area, the possibility of acceptance of digital payment is much higher. The growth of users of Smartphone and internet penetration in such area also facilitated the adoption of digital payment. **Bhatnagar (2015)<sup>3</sup>**, studied the level of the awareness as well as adoption of banking services by the rural customers. The researcher collected relevant data from 150 respondents through a structured questionnaire. It was found that out of 150 respondents only 120 respondents are aware of technology banking services. Out of 120, highly aware, customers are 100 and 20 respondents are partially aware about banking services based on technology. It was also found that awareness is highest in the case of ATMs and least in the case of telephone banking and in case of adoption out of 120 respondents who are aware of technology, banking services, only 95 (79.17 %) customers are using the technology based services regularly and 25 respondents are using technology banking services rarely. **Vidyapriya and Mohanasundar (2015)<sup>4</sup>**, studied about customer responsiveness on banking technology products in rural south India. Field surveys with structured questionnaires (interview schedule) were used to collect primary data from the customers on a random sample basis in the Branches in rural Tamilnadu. Indian Banks have effectively leveraged technology and introduced several variants of traditional products and new e-based services. While ATM has become popular for cash withdrawals, other services like mobile banking and internet banking were also used. It was found that the customers are still not using the full range of services available in ATMs. **Sadi and Noordin (2011)<sup>5</sup>**, mentioned in his study that Banks should identify the benefits of mobile banking for users. The author in his study found that customer attitude was correlated negatively with cost. Their intention to use mobile banking services decreases with increase cost; therefore, customer must be aware about the cost saving feature of mobile banking services through awareness.

## 8. RESEARCH QUESTIONS

To enable technology based banking services in rural area some basic groundwork in the areas of awareness and adoption levels of technology based banking services by the rural people need to be done. That can be achieved by answering the following research questions:

- How far the rural people are aware and ready to adapt to the technology based banking services and
- What are the major hindrances for rural people in adopting the technology based services?
- What can be done further to motivate their participation in using these technologies?

## 9 OBJECTIVES

- To study the usage level of banking customer on mobile banking applications
- To explore the role of demographics on consumer satisfaction of the Mobile banking application

## 10. HYPOTHESIS

### Hypothesis

(H<sub>0</sub>) There is no significant association between certain demographic variable and satisfaction level of mobile banking application .

(H<sub>1</sub>) There is a significant association between certain demographic variable and satisfaction level of mobile banking application.

## 11. RESEARCH METHODOLOGY

Methodology is a systematic way to solve the research problem. It may be understood as a science of studying how research is done scientifically This study is based on how much the technology enabled self-service specifically banking, mobile application has created an impact on the livelihood of people. This study would survey the people regarding their usage and satisfaction level on mobile banking application.

### 12.1. Research design

In order to solve the above mentioned research questions this study has adopt the descriptive research design comprising of data collection and analysis.

## 13. METHOD OF DATA COLLECTION

### 13.1. Primary data

Primary data are those which are collected fresh and for the first time, and thus happened to be original in character. It was collected by distributing Structured questionnaires.

### 13.2. Secondary data

Secondary data would be collected from the publications of various agencies, including RBI, books, magazines, newspapers, journals and publications of research scholars on the relevant topic

### 14. SOURCE OF DATA

In this study questionnaire method was used for primary data collection. The survey instrument was divided into three sections to elicit information on the demographic & the socio economic profile of the respondents, consumer's adoption of mobile banking applications, and satisfaction level of banking application. Relevant statistical tools were used to analyze the data collected using SPSS software

### 15. SAMPLING METHOD

Convenient sampling is used to survey the people in the selected study area and the sample size for the current study is 150 respondents. A structured questionnaire was distributed to collect the data. Reliability and Validity test was conducted

### 16. DATA ANALYSIS AND INTERPRETATION

After the data has been collected, it was processed tabulated and analyzed. The statistical tool adopted includes descriptive statistic, Chi-square, Factor analyses, and ANOVA. SPSS version 21.0 statistical software was used and the results obtained was analyzed and interpreted.

Table 1 Demographic Details Of The Customers

VARIABLE	CLASSIFICATION	FREQUENCY	PERCENTAGE
Gender	Male	78	52.0
	Female	72	48.0
		150	100.0
Age	21-30	34	22.7
	31-40	48	32.0
	41-50	34	22.7
	50above	34	22.7
		150	100.0
Education	High School	36	24.0
	Degree	61	40.7
	Master Degree	33	22.0
	Professional	20	13.3
		150	100.0
Occupation	Government Employee	34	22.7
	Private Employee	33	22.0
	Businesss	61	40.6



	<b>Student</b>	<b>10</b>	<b>6.7</b>
	<b>Housewife</b>	<b>12</b>	<b>8.0</b>
		<b>150</b>	<b>100.0</b>
<b>Income</b>	<b>10001-15000</b>	<b>35</b>	<b>23.3</b>
	<b>15001-20000</b>	<b>53</b>	<b>35.3</b>
	<b>20001-25000</b>	<b>48</b>	<b>32.1</b>
	<b>25000 Above</b>	<b>14</b>	<b>9.3</b>
		<b>150</b>	<b>100.0</b>

Source : Primary Data

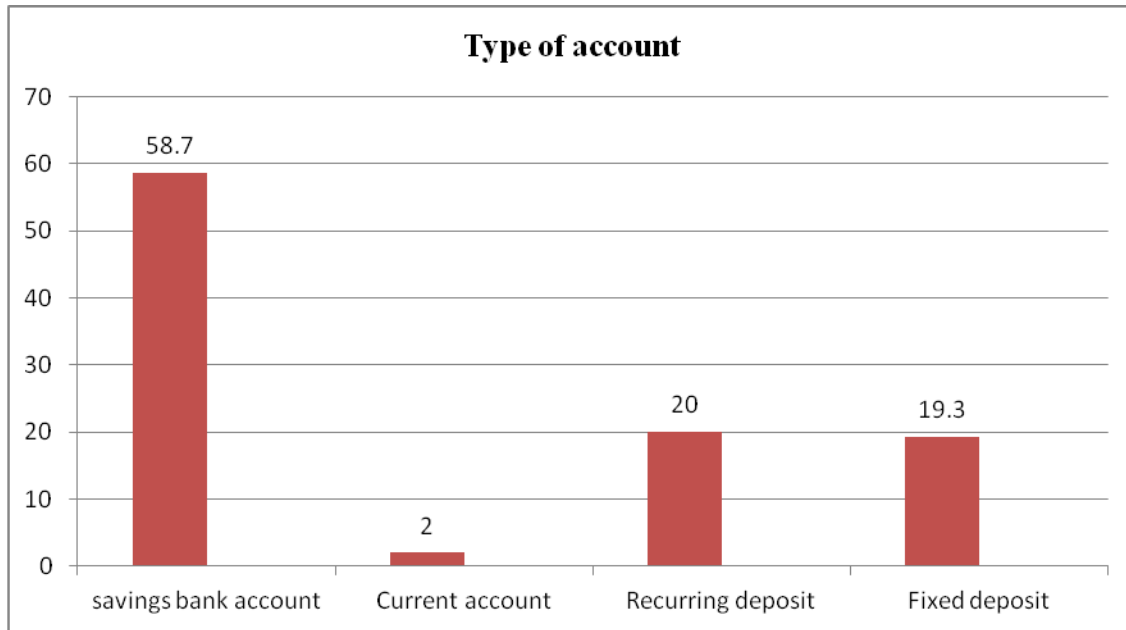
The above table summarizes the demographic information of the 150 respondents. Out of 150 respondents, majority of the respondents (52%) were male belonging to the age group of 31-40 (32%) possessing degree as their qualification .majority of the respondents does business and they earn around 15000 to 20000 per month.

Table 2 **Customers usage of Types Of Account**

<b>Types Of Account</b>		
	<b>Frequency</b>	<b>Percentage</b>
Savings bank account	88	58.7
Current account	3	2.0
Recurring deposit	30	20.0
Fixed deposit	29	19.3
Total	150	100.0

Source : Primary Data

It is inferred from the analysis that the majority (58.7%) of the respondents is operating the savings bank account and 30% of the respondents are operating the recurring deposit account and 29% of the respondents are operating the fixed deposit and 3% of the respondents are operating the current account



Source : Primary Data

Table 3 Customers Mobile Banking Application Usage

Mobile banking application usage		
	Frequency	Percent
once in a day	50	33.3
once in a month	51	34.0
once in a fortnight	11	7.3
Frequently	38	25.3
Total	150	100.0

Source : Primary Data

The above table explains about the frequency of mobile banking application usage. It is inferred from the analysis that the majority (34%) of the respondents use their banking application once in a month for day to day transactions.

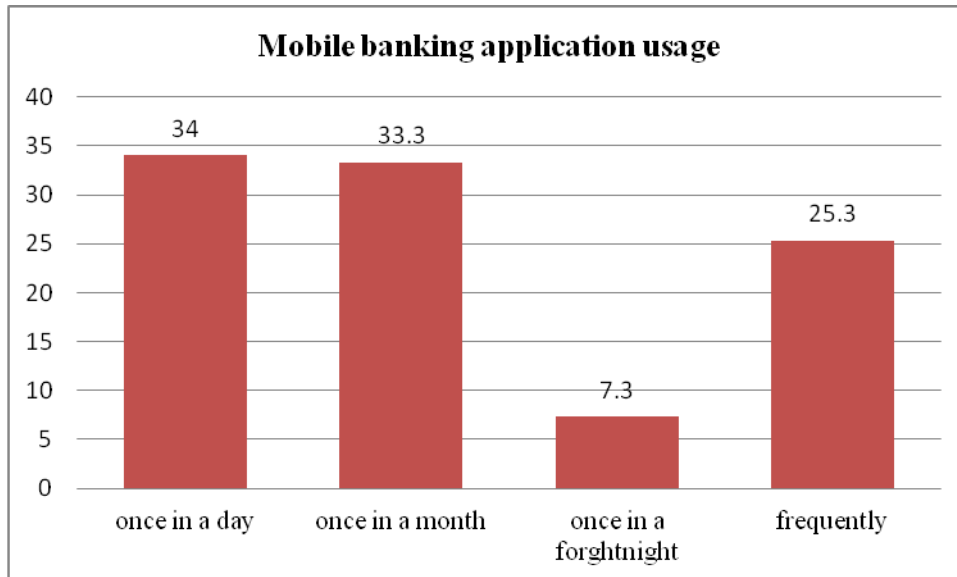


Table 4 Mean and SD of customer's opinion regarding various usage of mobile banking application

Mobile banking application services	Mean	Std. Deviation
M wallet recharge	2.03	.347
Account Information And Balance Enquiry	1.75	.810
Reward Point Status	1.87	.552
M Pass Book	1.03	.162
UPI Payment	2.57	.709
Mobile Recharge	2.77	.956
Online Locker	1.03	.162
Transfer With QR Code	2.16	.769
*99# Dial	1.00	.000

Source: primary data

#### Inference

The table above shows mobile banking application services used by customers .based on Mean score ,mobile recharge (2.77) is the frequently used services provided through mobile banking application followed by UPI Payment(2.57) ,Transfer With Qr Code(2.16) and M wallet recharge(2.03). the last factor is \*99#dial for balance enquiry(1.00).

**Table 5 Chi-Square Tests for association between age group and level of satisfaction with mobile banking application**

Gender	Satisfied with the mobile banking application		Total	Chi-Square Tests	P value
	Yes	No			
Female	49	29	78	19.526	0.000
	62.8%	37.2%	100.0%		
	42.2%	85.3%	52.0%		
Male	67	5	72		
	93.1%	6.9%	100.0%		
	57.8%	14.7%	48.0%		
Total	116	34	150		
	77.3%	22.7%	100.0%		
	100.0%	100.0%	100.0%		

**(H<sub>0</sub>)** There is no association between certain gender and the satisfaction level of mobile banking application.

**(H<sub>1</sub>)** There is an association between gender and the satisfaction level of mobile banking application

Since the p value is less than 0.05 the null hypothesis is rejected at the 5% level of confidence. Hence concluded that there is no association between gender and level of satisfaction with mobile banking application. Based on the row percentage 62.8% of Female are satisfied with the mobile banking application. Whereas 37.2% of Female are not satisfied with the mobile banking application. Where's as 93.1% male are satisfied with the mobile banking application, whereas 6.9% of Male are not satisfied with the mobile banking application .

## 17. Conclusion

. The study aims to examine usage pattern of rural people and the level of satisfaction with technology as the key factor. It was found that majority of the respondents use mobile banking apps use once in a month for day to day transactions like transfer of amount ,purchase of products online and payment of due amount, recharge of their mobile and wallets . Though they use banking application for transaction they required awareness among the rural people to the fullest usage of technology .mobile banking application still is in nascent stage in the rural area. The people who are educated and tech savvy use the mobile banking apps for the transaction. The others need to be educated regarding the usage of mobile banking application. The authorities must develop apps convenient for rural people they must also create awareness among rural people regarding various mobile banking applications services which they are unaware of.

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