

# Awareness and Adoption of Technology in Banking Especially by Rural Areas Customers: A Study of Udaipur Rural Belt

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## **Abstract**

ICT has been the cornerstone of recent financial sector reforms aimed at increasing the speed and reliability of financial operations and initiatives to strengthen the banking sector. The intense competitive environment is continuously forcing the banks to become customer-centric. Today technology has emerged as a strategic resource for achieving higher efficiency, control of operations, productivity and profitability for Banks as well as it is the realization of their 'anywhere, anytime, anyway' banking dream for customers. But instead of all these benefits, the awareness and adoption rate of banking services among the rural customers is still found very low. Hence this paper presents the preliminary findings on investigation of the level of the customer's awareness as well as adoption of banking services by the rural customers based on demographics, bank type, familiarity with computer/internet.

## **Keywords:**

Banking; Information and Communication Technology (ICT); Awareness, Adoption, Internet

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## **Introduction**

Banking is the blood of the economy whose vitality signifies the health and prosperity of any nation. India had a system of indigenous banking from very early times, though it was not similar to banking in modern times. Since independence commercial banks have a wide network to operate in the country under RBI. Straight from the nationalisation of banks in 1969 to the recent application of BASEL III, from a small number of PSB to a huge figure of private and foreign banks, from its humdrum and laid back system to the modern hi-tech systems with e-banking, m-banking, t-banking, etc. banks has come up to a long way. Banking Industry in India has travelled a protracted path to assume its present status and is continuously undergoing nonstop transformation.

Modern banks execute multiplicity of function by providing numerous products and services to the customer with the ultimate objective to increase profits along with customer satisfaction. Innovation is a dynamic phenomenon which involves adoption of new technology,

products, services and methods. The technological innovation in banking actually began in 1950 well before it began in most of the industries, when the first automated machine was installed at a few US Banks, which then became common in subsequent decades.

### **E-Banking in Rural Areas of Udaipur District**

Banking technology also assumes the activity of using advanced computer algorithms in raveling the patterns of customer behaviors by sifting through customer details such as demographic, psychographic and transactional data. This activity is also known as Data Mining which helps bank to achieve their business objectives by solving various marketing problems such as customer segmentation, customer scoring, target marketing, market based analysis, cross sell, customer retention by modeling churn and so forth.

Electronic banking refers to the use of technology which allows customer to access banking services electronically whether it is to pay bills, transfer funds, view account or to obtain information and technology and advices. Internet or web based banking is network of banks and financial institutes as well other sealers. It provides electronic payments and settlement services to customers. It implies the most pragmatic use of information technology as medium of universal communication. It has brought unprecedented changes in banking industry.

Today technology has emerged as a strategic resource for achieving higher efficiency, control of operations, productivity and profitability for Banks as well as it is the realization of their 'anywhere, anytime, anyway' banking dream for customers. But instead of all these benefits, the awareness and adoption rate of banking services among the **rural** customers is still found very low. Hence this study will basically focuses on investigation of the level of the customers awareness as well as adoption of banking services by the rural customers. There are many factors like security & privacy, trust, innovativeness, familiarity, awareness level increase the acceptance of technology based banking services among rural Indian customers.

### **Review of Literature**

**Malik, S. (2014)** said that financial innovation is key to survival of banks in contemporary banking environment. The importance of financial innovation is widely recognized. Innovation in product development is one of the forms of innovation that has been used by banks. **Srivastav, P.K. (2013)** conventional banking is an art but e-banking is more of science than art as it is more knowledge based and scientific in using electronic devices. **Suresh (2008)** highlighted recently developed e-banking technology had created unpredicted opportunities for the banks to organize their financial products, profits, service delivery and

marketing. The author analyzed that e-banking will be an innovation if it preserved both business model and technology knowledge, and disruptive if it destroys both the model and knowledge. **Manoharan (2007)** highlighted the e-payment system in India and its performance impact on Indian banking sector. The author described that competition in banking industry had forced the banks to rethink the way they operate their business. So, e- banking has made it possible to find alternate banking practices. In the paper, the author divided the payment system in India into three parts, i.e., large value payment system, retail payment system, and retail electronic system. **Sakkthivel A M (2006)** conducted an extensive primary research in India in order to identify the willingness of Internet users to buy different services over Internet and provides a specific focus to identify the impact of demographics in influencing Indian Internet users in consuming different services online. The outcomes would help the corporate world to understand the importance of demographics on online purchase which could be adopted and deployed for better use.

### **Rationale of Research Problem**

Providing financial services to poor people is costly, because they have small amount of money but after liberalisation, technology banking is spreading their wings continuously in small and rural areas. During last two decades, we have observed that technology is reaching and capturing various day to day activities of life like use of mobiles, laptop, tablets, plastic cards etc. Urban population is very well versed with technology but if we talk about rural areas, customers are untouched with various technological services provided by their banks. Hence in order to increase the rural customer base for greater use of technology related services, it is imperative to understand the customer awareness and usage level of rural customers towards technology based banking services. Information on the above aspects would be useful to formulate program to motivate more and more customers to use technology based banking services. Therefore in lieu of the above mentioned issue, this project study is relevant to be done.

### **Objectives of The Study**

The tremendous advances in technology in the banking industry worldwide have turned out to be the nucleus issue of various studies all over the world. The research was guided by the following research objectives;

1. To study awareness of technology based banking services among rural customers.
2. To analyse adoption and usage pattern technology based banking services among rural customers.
3. To study the impact of familiarity of internet use on awareness and usage of technology base banking

services among rural area customers.

**Hypothesis**

- H1<sub>a</sub>: The awareness of customers regarding about the technology based banking services and Age, Gender, Education, Profession and Income of customers are related.*
- H2<sub>a</sub>: The usage status of customers regarding technology based banking services differs from Age Wise, Gender Wise, Education Wise, Profession Wise, and Income Wise.*
- H3<sub>a</sub>: Familiarity with computer and Internet influences the regular usage of technology based banking services*
- H4<sub>a</sub>: The status of usage for different technology based banking services differ significantly.*
- H5<sub>a</sub>: There is no significant difference between the awareness levels among the Public and Private bank Customers.*
- H6<sub>a</sub>: There is no significant difference between the usage levels among the Public and Private Bank customers*

**Descriptive Research Design**

In order to understand the role of technology in banking, the awareness level of customers especially of rural areas, the usage pattern and various factors affecting the promotion of technology based banking services along with various problems faced by them while using them, to study all these problems, a descriptive research design was framed. In this

research one survey was conducted in three major rural area of Udaipur district. For the same one schedule was framed, which was then filled by the investigator and the data collected were then undergo empirical testing. The data is collected through a descriptive survey done with the sample of 150 rural customers.

**Sample Design**

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting item for the sample. Sample design may be well lay down the number of items to be included in the sample i.e. size of the sample. Respondents include customers of reputed public sector bank and private sector bank existing in the three different cluster of rural belt of Udaipur district. Respondents are those who already have their account in that particular bank and are of different age, sex, religion, profession and family background.

**Sample Size**

In this study simple random sampling method has been used. Total 150 schedules were filled by the interviewer from three different sample units. The division of respondents is shown below in table 1

**Sample Units**

The customers are selected randomly from three different major rural areas of Udaipur district Kherwada, Mavli and Salumber were selected and proportionally schedules were filled from each area. 50 schedules were filled by the interviewer from the each division selected on random basis.

**TABLE 1: DISTRIBUTION OF SAMPLE UNITS**

S.No.	Mavli	Salumber	Kherwada
1	Mavli	Salumber	Kherwada
2	Fatehnagar	Sarada	Rishabdeo
3	Vallabh Nagar	Lasadia	Kalyanpur
4	Kheroda	Kun	Parsad
5	Bhinder	Semari	Chawand

**Sampling Selection Techniques**

Simple Random sampling method is used in the survey .Three division Kherwada, Mavli and Salumber were selected and proportionally 50 customers are selected from each.

**Data Collection**

There are two methods of generating information or collecting data required for research, one through observation and other through experimentation. Observation is the process of measuring variables just as they occur in nature, without directly or deliberately

influencing their values. Experimentation method has the foundation of science. Its essence is the manipulating an independent variables and then measuring the resulting change in the dependent variable. The data is collected through both primary and secondary sources.

### Primary Data Collection

The most appropriate method for this research work is Survey Method. It consists of Personal Interview, Telephone Interview and Mail Interview. It is the technique of gathering data by asking questions to people who are thought to have desired information. Schedules were prepared and 150 respondents were contacted.

### Construction of A Questionnaire

Primary data was collected from respondents using a self administered questionnaire, this created anonymity leading to more valid responses as well as allowing respondents to fill them at their convenience. The questionnaire was designed according to the objectives and study variables. The questionnaire is divided into 5 parts.

**Part I** consists has seven items which aims at collecting information about the **demographic** details of the rural customers.

**Part II** dealt with questions framed specifically for understanding the **awareness level** of customers for technology in banking.

**Part III** dealt with questions framed specifically for understanding the **usage pattern and familiarity** of technology in banking.

### Secondary Data

The sources of secondary data that is referred are Libraries, trade publications, companies' brochures, websites, various books and journals are some important sources of data are the sources for gathering information

### Statistical Tools And Techniques

The key literature on banking and role of technology in banking is reviewed. Primary data was collected using questionnaire survey. Descriptive and inferential analysis was done and Statistical tools such as ANOVA and Correlation test etc employed using SPSS version 16 to analyze the data.

### Limitation of Study

Each and every human being is unique in itself. We cannot apply the same approach to different people. As each individual has his/her unique set of mind, opinions, beliefs, aspiration etc therefore we need a specific approach for specific person. Every research work is subjected to certain limitations; and this study is also not an exception. The present study has the following limitations:

1. The responses for the study have been solicited from the rural belt of Udaipur Division, Rajasthan state only. The expectations of the customers in Udaipur may vary from those of the rest of India.
2. Any primary data based study carried through a pre-designed questionnaire/ Schedule suffers from the basic limitation of possibility of difference between what is recorded and what is truth, no matter how carefully the interview has been conducted. The present study may also suffer from this limitation because the people might not have deliberately reported their true opinion due to some biasness. Objectives of the study are based upon primary data which is collected from the customers' perspective. So, the study may suffer from the elements of biasness; and it is difficult to reach at the real situation.

### Data Nalysis and Interpretation

The data collected through schedules were coded, and analyzed through spss.16.0 version. The analysis and interpretation is describe in five broad categories

**Part A: It describes the respondent's distribution based on area, demographic factors and bank wise.**

**Part B: It deals with the extent of awareness, usage and familiarity of respondents with technology based banking services and impact of demographic on awareness and usage**

**Part C: It deals with comparative analysis of awareness and usage level among respondents of public and private sector bank**

### Part A – Distribution of Respondents

#### A1: Area Wise Distribution:

**TABLE 2: AREA WISE CLASSIFICATION**

Division	Number of Respondents
Kherwara	50
Mavli	50
Salumber	50

**Interpretation:** Table 5.1 shows that Schedules were filled from three divisions of Udaipur city. There are five subdivisions in each division. Total 150 schedules were filled and from each three division 50 schedules taken for the study.

**A2: Distribution on The Basis of Awareness of Technology:** Schedules from 150 respondents were filled to know that so many aspects. Beginning of the schedule is with to know how many respondents who are having their account in banks are really aware about technology based banking services.

**TABLE 3: AWARE OF TECHNOLOGY BASED BANKING SERVICES**

Aware	Number of Respondents
Traditional Banking	150
Technology Banking	120

**Interpretation-** Table 3 shows that out of total 150 schedules it is found that only out of 150 respondents only 120 respondents are aware about technology based banking services.

**A3: Demographic Distributon:** The following Tables/Graphs show the various demographic conditions of the only those respondents who are using technology while performing banking transactions.

**Gender Wise Distribution**

**TABLE 4: GENDER CLASSIFICATION**

Gender	Percentage	Number
Male	89.17	107
Female	10.83	13

**Interpretation:** Most of the respondents belong to male category (89.17%). Hence we can say that in rural areas

most of the bank transactions are still handled by males in comparison to females- **“Male dominant”**.

**Age Wise Distribution**

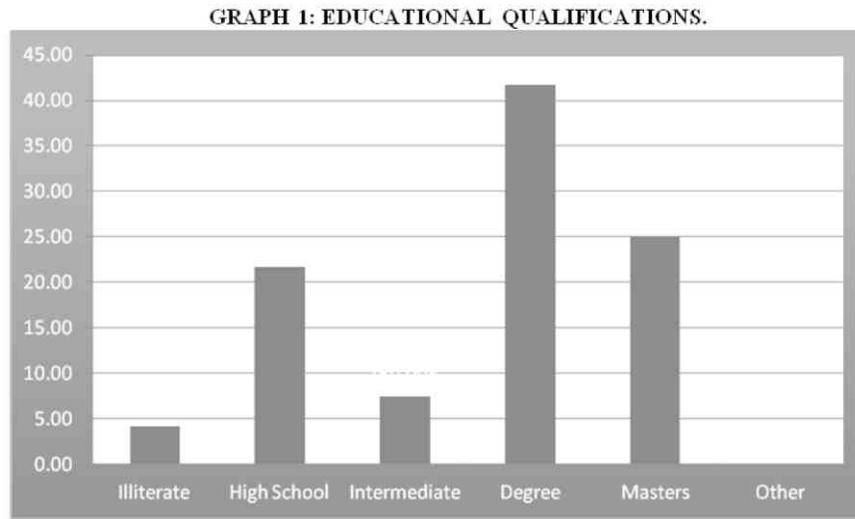
**TABLE 5: AGE GROUP CLASSIFICATION**

Age	Percentage	Number
10 - 20 Yrs	4.17	5
21 - 30 Yrs	34.17	41
31 - 40 Yrs	49.17	59
41 - 50 Yrs	9.17	11
Above 50 Yrs	3.33	4

**Interpretation:** Most of the respondents belong to age category of 31-40 years (49.17%) and then 21-30 years (34.17 %). Hence we can say that in rural areas most of the

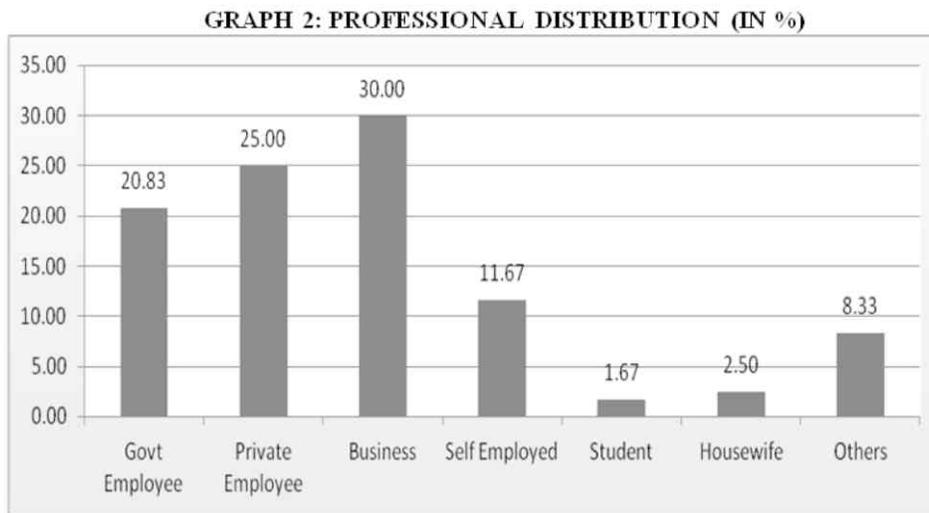
bank transactions are handled by youth - **“Youth are ahead”**

## Educational Qualification



**Interpretation:** Graph 1 shows that most of the respondents (21.67%). “Graduates are mostly users”. are either graduates (41.67%) or have passes high schools

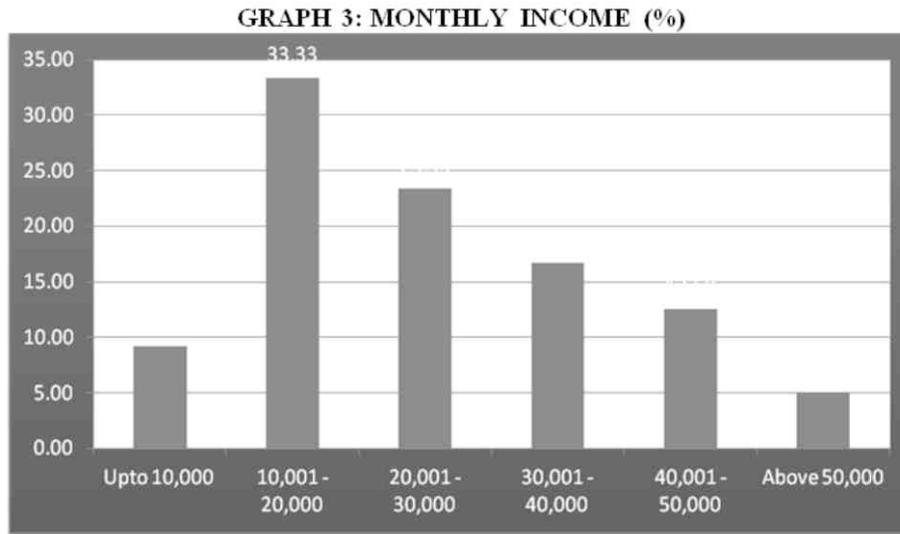
## Profession Wise Distribution



**Interpretation:** Graph 2 shows that most of the respondents are entrepreneurs who self initiated their business or are continuing their family business. Hence we can conclude that most of the people dealing with the Banks

are Businessman in the rural areas other people are least interested in technology based banking services. “**Businessman is technology users.**”

**Monthly Income:** The following graph shows the monthly income of the respondents.



**Interpretation:** Graph 3 shows that most of the respondents run their own business and 33.33% of them have a monthly income lying between 10001-20000rs.

**A4: Bank Wise Distribution of Customers**

**TABLE 6: BANK WISE CLASSIFICATION**

Bank type	Number of respondents
Public Sector Bank	74
Private Sector Bank	46

**Interpretation:** Table 5.5 shows that out of total schedule filled, 74 were the customers of public sector bank and 46 were customers of private sector banks who are using technology while dealing with banking services. Hence we can say that most of the respondents in our study are having their accounts in public sector bank.

**PART B: Deals with Awareness Level, Usage Status and**

**With Familiarity with Technology and Impact of Demographic Factors on Awareness, Usage and Familiarity.**

**B1: Awareness Level and Impact of Demographics**

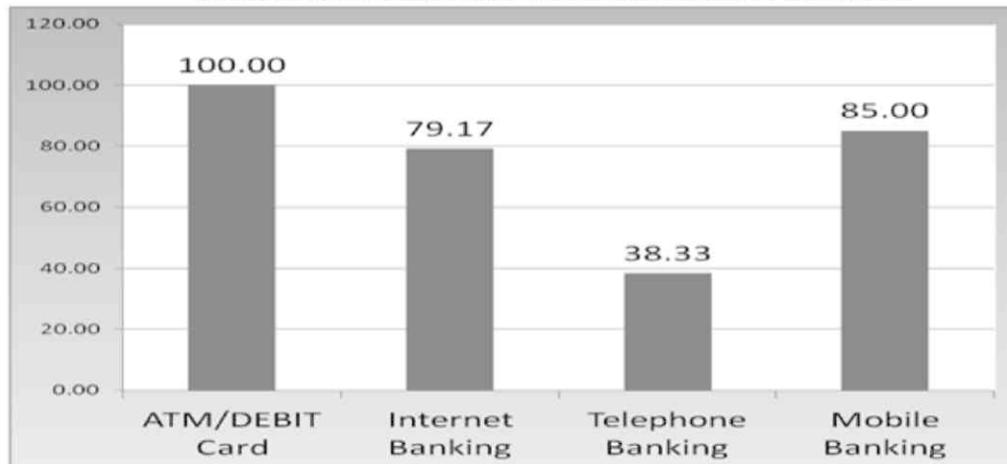
The following chart & table shows the awareness with technology service among respondents.

**TABLE 7: AWARENESS WITH TECHNOLOGY SERVICE**

Awareness with Service	Percentage	Number
High	83.33	100
Partially / Low	16.66	20

**TABLE 8: AWARENESS WITH DIFFERENT SERVICE**

Awareness with Service	Percentage	Number
ATM/DEBIT Card	100	120
Internet Banking	79.17	95
Telephone Banking	38.33	46
Mobile Banking	85.00	102

**GRAPH 4: AWARENESS WITH DIFFERENT SERVICE**

**Interpretation:** Table 8 shows that most of the respondents are highly aware of the technology 83.33% and few are partially aware. If we talk about different innovative services like ATM, Internet Banking, Telephone Banking and Mobile Banking. It is clear from the table 5.7 that out of these four innovative technology based banking services provided by banks, ATM/Debit card has the majority of 100% awareness followed by mobile banking with 85%.

**Impact of Demographic Characteristics on the Awareness level of Rural People.** In order to understand

whether the different demographic characteristics influences and causes any impact on the awareness level of respondents about technology based banking services. Chi Square Test was applied to determine whether there is a significant impact of demographic on awareness level of the respondents. The hypothesis were framed as:

*H1<sub>a</sub>: The awareness of customers regarding about the technology based banking services and Age, Gender, Education, Profession and Income of customers are related.*

**TABLE 9: AWARENESS LEVEL AND DEMOGRAPHIC**

Demographic Characteristic	Pearson Chi Square	Df	Sig Value
Gender	0.017	1	0.895
Age Group	10.051	4	0.04
Education	42.047	4	0
Profession	15.154	6	0.019
Income	26.767	5	0

**Interpretation:** Chi-square test shows that the p value is lesser than .05 in case of age, education, profession and income except in the case of gender, this signifies that the **null hypothesis is rejected** in all the cases except Gender. Hence we can conclude that demographic factors like Age, Education Level, Profession and Income influences the awareness level. The significant value shows that these four

demographic characteristics of the respondents do influence their awareness level regarding technology based banking services.

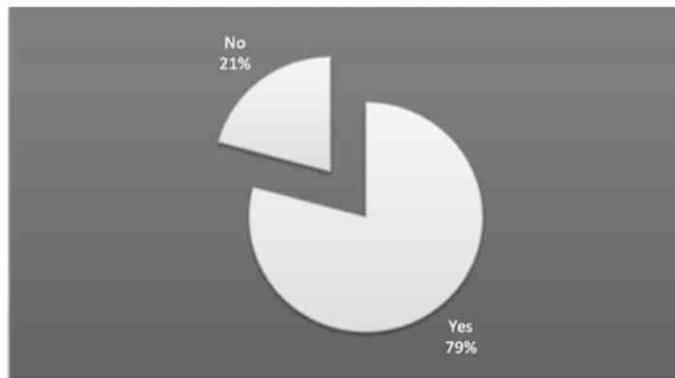
**B2: Usage of Technology and Impact of Demographics**

1. The following chart & table shows the usage of technology by the customers on the regular basis or not.

**TABLE 10: REGULAR USAGE OF TECHNOLOGY**

Using Tech. Services	Percentage	Number
Yes	79.17	95
No	20.83	25

**GRAPH 5: USAGE OF TECHNOLOGY**



**Interpretation:** Table 10 shows that out of total 120 respondents who are aware of technology banking services, only 95 (79.17%) respondents are using technology services regularly for banking operations in one or other mode.

Remaining 21% respondents are using technology but not the regular basis.

2. The table 11 shows that which service is more commonly used by the customers.

**TABLE 11: SERVICES TRIED**

Tried which banking service	Percentage	Number
ATM/DEBIT Card	100	120
Internet Banking	66.66	80
Telephone Banking	13.33	16
Mobile Banking	65.83	79

**Interpretation:** As per the above table 11, the customers are using technology in banking either regularly or rarely but out of all four categories, majority of them are using ATM/Debit card with 100% followed by internet banking with 66.66%. Telephone Banking is least preferred by the respondents, reason can be greater availability of mobile and internet facilities.

3. Impact of demographic characteristics on the regularity of use of technology based banking services by the rural

customer:

In order to understand whether the different demographic characteristics influences and causes any impact on usage of technology based banking services, Chi Square Test was applied. The hypothesis framed is:

**$H_{2a}$ : The usage status of customers regarding technology based banking services differs from Age Wise, Gender Wise, Education Wise, Profession Wise, and Income Wise.**

**TABLE 12: USAGE STATUS AND DEMOGRAPHIC**

Demographic	Pearson Chi Square	Df	sig value
Gender	0.262	1	0.608
Age	10.94	4	0.027
Education	35.214	4	0
Profession	22.311	6	0.001
Income	14.552	5	0.012

**Interpretation:** As the p value is lesser than .05 in all demographics except in the case of gender, this signifies that the **null hypothesis is rejected** in the case of age, education, profession and income. Hence we can conclude that all demographic factors are Age, Education Level, Profession and Income influences the usage status except gender doesn't influences the usage status of the rural customers. The Cross tables mention below gives an idea on the relationship.

### **B3: Familiarity with Computer/Internet**

An Idea was taken to understand the computer knowledge of the rural customer. **Kumar S and Anjum B (2014)** states that the online banking is a demand of today's customers because it saves the cost and time for the settlement of their financial transactions. The major problem observed at end of the study is the lack of knowledge among the people about the use of Internet and computer, which ultimately hamper the growth of E-banking operation.

**TABLE 13: FAMILIARITY WITH COMPUTER/INTERNET USE**

Familiarity with computer	Percentage	Number
No Knowledge	15.83	19
Beginner	21.67	26
Average	50.00	60
Advanced	10.83	13
Expert	1.67	2

**Interpretation:** Table 13 shows that out of the total respondents 50% of the sample size have an average familiarity with computers, 1.67% of total respondents have an expert familiarity with computers whereas 15.83% of respondents have no knowledge about computers.

**Relationship between Computer/Internet knowledge and the usage with e-banking:** In today's world no one is aloof from the technology. It has become the part and parcel of each and every individual's life. The test was applied to study whether there is a direct relationship between

familiarities with the Computer/Internet with usage of e-banking services or not. In real world increase in familiarity with computer/internet increases the usage of technology based banking services. Therefore to understand, whether the familiarity with the computer/internet knowledge influences the usage status of technology based banking services, Correlation test was applied.

**H3a: Familiarity with computer and Internet influences the regular usage of technology based banking services.**

**TABLE 14. PEARSON AND SPEARMAN CORRELATION TEST**

	Value	Asymp. Std. Error (a)	Approx. T(b)	Approx. Sig.
<b>Interval by Interval Pearson's R</b>	<b>.488</b>	<b>.075</b>	<b>-6.075</b>	<b>.000(c)</b>
<b>Ordinal by Ordinal Spearman Correlation</b>	<b>.469</b>	<b>.075</b>	<b>-5.773</b>	<b>.000(c)</b>
<b>N of Valid Cases</b>	<b>120</b>			

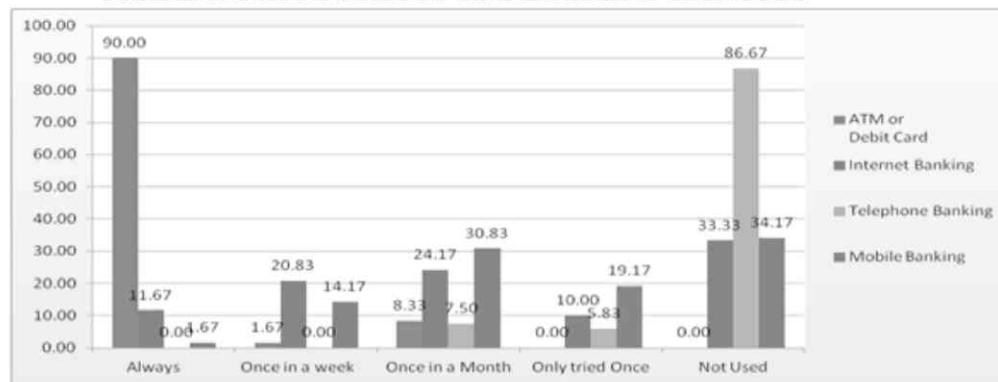
**Interpretation:** Table 23 shows that Null hypothesis is rejected and a moderate positive, but significant relationship (with p value=0.00) is identified between the computer knowledge and usage status of various technology based banking services. This is a very natural phenomenon that as there is an increase in computer knowledge, usage of technology based banking services will be more used by the customers.

**B4: Usage Status for Different Technology Based Banking Services.**

The following chart & table shows the usage pattern of the respondents towards different categories of technology based banking service.

**TABLE 15: USAGE STATUS OF DIFFERENT SERVICES**

Status of Usage	ATM Card	Internet Banking	Telephone Banking	Mobile Banking
Always	108	14	0	2
Once in a week	2	25	0	17
Once in a Month	10	29	9	37
Only tried Once	0	12	7	23
Not Used	0	40	104	41

**GRAPH 6: USAGE STATUS OF DIFFERENT SERVICES**

**Interpretation:** it is evident from the table 15 that the frequency of usage of ATM/Debit card regularly is in maximum with 90%. Similarly the usage pattern of internet banking it is observed that maximum people are using it once in a month or mostly once in a week. It may be due to availability of internet services is less frequent. But if we talk about telephone banking which is least preferred, data shows that then maximum respondents had not used this service or tried only once. Mobile banking is average used

by the people once in a month.

Therefore to understand that the difference in the usage status for different technology based banking services is significant or insignificant; one way ANOVA test is applied, taking computer knowledge as dependent variable

**H4a: The status of usage for different technology based banking services differ significantly.**

**TABLE 16: ONE WAY ANOVA TABLE ON USAGE PATTERN**

Sources of variance	Sum of Squares	DOF	Mean Squares	Test Statistics
B/w Sample	0	3	0	0
Within Sample	17032	19	896.42	
Total	17032	22	896.42	

**Interpretation:** One way ANOVA test is applied on table 5.22 to determine the whether the usage pattern are significantly differs for different services. The tabulated F value is 3.5219 which is more than the critical value which implies that the **null hypothesis is accepted** stating that the usage status is **similar** for different e-banking services. Hence we can conclude that the differences are insignificant and are just a matter of chance

#### **PART C: Bank Types and The Awareness/usage Status**

#### **C1: Bank Types and The Awareness Status**

In order to understand the difference among the awareness level among the private and public bank the chi square test is applied. Table 5.30 gives a cross tabulation between the type of bank and the awareness level. Hypothesis formed is as follows:

**H5<sub>a</sub>: There is no significant difference between the awareness levels among the Public and Private bank Customers.**

TABLE 17: CROSS TABULATION: BANK TYPE AND AWARENESS

Bank Type	Awareness Level		Total
	High	Low	
Public Bank	56	18	74
Private Bank	44	2	46
Total	100	20	120

TABLE 18: CHI-SQUARE TESTS

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	11.86	1	.263		
Continuity Correction(a)	.475	1	.491		
Likelihood Ratio	1.408	1	.235		
Fisher's Exact Test				.405	.254
Linear-by-Linear Association	1.244	1	.265		
N of Valid Cases	120				

**Interpretation:** Respondents of public and private sector bank might be having different outlook towards technology use in banking. Hence Chi square test is applied to the data collected and it is found that the null hypothesis is accepted as the p value is higher than .05, no significant difference is identified among the awareness level of Public and Private Banks customers.

**C2: Type of Bank and Usage Level**

In order to understand the difference among the usage level among the private and public bank the chi square test is applied.

**H6<sub>a</sub>:** There is no significant difference between the usage level among the Public and Private Bank customers

TABLE 19: CROSS TABULATION: BANK TYPE & USAGE LEVEL

Bank Type	Usage Level		Total
	Yes	No	
Public	55	19	74
Private	40	6	46
Total	95	25	120

TABLE 20: CHI-SQUARE TESTS

	Value	DF	Asymp. Sig (2-sided)	Exact Sig (2-sided)	Exact Sig (1-sided)
Pearson Chi-Square	2.745(b)	1	.098		
Continuity Correction(a)	2.032	1	.154		
Likelihood Ratio	2.888	1	.089		
Fisher's Exact Test				.111	.075
Linear-by-Linear Association	2.722	1	.099		
N of Valid Cases	120				

**Interpretation:** Table 5.33 shows that the usage level of respondent of public and private sector bank differs. Hence to check the significance of relationship between the usage status and type of bank, Chi-Square test was applied. The result shows that the null hypothesis is accepted as the p value is higher than .05, no significant difference is identified among the usage level of Public and Private Banks customers.

**Conclusions**

Indian banking industry has undergone major changes due to economic liberalisation and globalisation which led to managerial innovations, information technology revolution, increasing competition, changing customer requirements and financial sector reforms. The application of information and communication technology concepts, techniques, policies and implementation strategies to banking services

has become a subject of fundamental importance and concerns to all banks and indeed a prerequisite for local and global competitiveness.

In the present context of the market scenario the present study is very relevant and will be very helpful to determining awareness and adoption of technology based banking services among rural customers. It also helps in determining the basic problems while using them and reasons behind not using these services. The present study has been made through respondents of various reputed public and private banks of rural areas of Udaipur division.

**Demographic:** - Socio economic profile reveals that most of the users of banking and technology are male (80%), belonging to the age group of 31-40 (49%) with graduation degree (41.67%) and mostly engaged in either in their own venture or managing their parental business. Almost 33 percent of the people have their monthly income in the range of 10000-20000. Among all 74 were the customers of public sector bank and 46 were customers of private sector banks.

**Awareness Level:**-It is 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 or less aware about banking services based on technology. If we look at different services than it is very clear that awareness is highest in the case of ATMs and least in case of telephone banking.

**Awareness and Demographic:** - they are studied together with the help of Chi-square test to determine the relationship between them. Hence it is concluded that demographic factors like Age, Education Level, Profession and Income influences the awareness level. Only gender has no implication on the awareness level of the customers of the banks.

**Usage Level:** - It is found that 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. The frequency of usage of ATM/Debit card regularly is in maximum with 90%, whereas, the usage of internet banking varies; most of the people use once in a week and maximum people use once in a month is high with 20.83% as being the availability of internet services is less frequent. But if we talk about mobile banking then maximum respondents are using this service once in a month. Telephone banking is used by few people either once or once in a month. On applying ANOVA test it is concluded that the usage status is **similar** for different e-banking services.

**Usage Status and Demographic:** - They are studied together with the help of Chi-square test to determine the relationship between them. Hence it is concluded that

demographic factors like Age, Education Level, Profession and Income influences the awareness level. Only gender has no effect on the usage level of the customers of the banks.

### **Importance of Computer and Internet Knowledge in Enhancing The usage OF E-banking Services.**

The technology has made its own world in the world of human beings. More than 50 percent of the customer has internet and computer knowledge. Correlation test was applied to understand the relationship between familiarity with computer knowledge and use of technology based banking services, it is found that a moderate degree of positive correlation is identified between customer knowledge about computers and the use of technology in banking. Hence it clearly signifies the importance of computer and internet knowledge in enhancing the usage of e-banking services.

### **Bank Types and The Awareness/usage Status**

Respondents of public and private sector bank might be having different outlook towards technology use in banking. To study the same data is collected and Chi-Square test is applied and it is concluded that no significant difference is identified among the awareness level and usage status of Public and Private Banks customers. It indicates that even public sector banks are also taking any equal initiative in enhancing the usage of e banking.

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