

Customer Perception towards Adoption of Digital Banking: Public and Private sector banks in India

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ABSTRACT: The present study has focused on customer who uses digital banking. The objective of the study is to find the customer perception and adoption of the digital banking. The study also explored the consumer awareness, perceptions and willingness to engage in using a smart phone to replace the content of their physical wallets. Population for the research are the customers who use mobile apps as a major medium for doing banking transaction. Major findings of the research are digital banking is getting popularity among the young lots such as students and employees. Further the study also explored which Digital banking gateway services are preferred by the consumers. The main influencing factors have been identified as time, convenience, security, loyalty/reward points and discount deals etc. Making payment through digital banking can be a great benefit to the users in terms of convenience, saving time and money. One of the prime obstacles is security issues, due to which the users gets anxious about his or her confidential information which may get disclosed. Therefore, the digital payment providers need to understand and meet or even exceed towards the users trust expectations. This includes not only addressing security and privacy concerns but also safeguarding the backup mechanism if the phone is lost or stolen. The study mainly focused on Security, Necessity, Time and satisfaction of the services used that affect the consumer's perception toward digital payments.

KEYWORDS: Mobile apps, digital banking, customer perception, customer adoption.

INTRODUCTION: Digital banking involves automating traditional banking services, enabling customers to access financial services, manage accounts, and conduct transactions entirely online via mobile apps and websites, removing the need for physical branch visits. It offers 24/7 access, faster processing, improved security, and cost savings for both users and financial institutions. A digital bank represents a virtual process that includes online banking and beyond. As an end-to-end platform, digital banking must encompass the front end that consumers see, the back end that bankers see through their servers and admin control panels and the middleware that connects these nodes. Ultimately, a digital bank should facilitate all functional levels of banking on all service delivery platforms. In other words, it should have all the same functions as a head office, branch office, online service, bank cards, ATM and point of sale machines. Digital banking is getting more and trendier among the consumers. Digital payments are growing in India as the consumers are relying upon the digital life style to make things convenient and faster and the consumers are embracing digital payment with open arms. The reason digital banking is more than just a mobile or online platform is that it includes middleware solutions. Middleware is software that bridges operating systems or databases with other applications. Financial industry departments such as risk management, product development and marketing must also be included in the middle and back end to truly be considered a complete digital bank. Financial institutions must be at the forefront of the latest technology to ensure security and compliance with government regulations. Ministry of Electronics and Information Technology, Government of India envisages Paperless, Cashless and Faceless services across the country, especially in rural and remote parts of India. It further envisages common e-Governance infrastructure that will offer end-to-end transactional experience for a citizen, businesses as well as internal government functions, which includes accessing various services and making payments and receipts through electronic modes. The Apex Committee on Digital India has recommended a targeted and time bound approach to implement digital payments for citizens across all the e-Services of Government Ministries and Departments.

One of the main reasons electronic products were introduced was that the banks were losing their market share. Digital banking has assisted the banks in retaining their customer and their market share by reducing the cost in many areas, especially those associated with providing services to the customer and also to enhance their image. By the same the customers are fully influenced with these services provided by the banks and also these services helps the customer to save their money. Due to digital banking services it is seen that the loyalty of the customer has become very volatile and today's discern customer is now more services driven than loyalty driven.

Key Components and Features of Digital Banking
Mobile & Internet Banking: Accessing accounts through apps or websites for fund transfers, bill payments, and check deposits.
Digital Wallets: Apps that store payment methods (credit/debit cards, crypto) for secure, contactless, and instant payments.
UPI & Real-time Payments: Instant money transfers directly between bank accounts, commonly used via mobile devices.
Neobanks: Financial institutions that operate exclusively online without any physical branches.
Automated Services: AI-powered chatbots for customer support and AI for fraud detection, offering personalized experiences.

Digital revolution has provided an easy way to go for digital payments. India has more than 100 crore active mobile connections and more than 22 crore Smartphone users as of March 2016. This number is going to increase further with a faster internet speed. The reach of mobile network, Internet and electricity is also expanding digital payments to remote areas. This will surely increase the number of digital payments.

Benefits of Digital Banking
Convenience: Banking can be done anywhere at any time, eliminating travel to branches.
Cost Efficiency: Lower transaction fees and higher interest rates for users, along with reduced operating costs for banks.
Speed & Accuracy: Automated processes reduce manual errors and speed up transactions like loan processing.
Enhanced Security: Features like biometric authentication, encryption, and instant transaction alerts.

The payment system in any country needs to pass the litmus test of safety, security, soundness, efficiency, and accessibility. In order to address all these, payment systems have evolved from barter to currency, to digital systems. We are witnessing enormous change in the payment systems, disrupting the monopoly of physical/paper-based system by electronic ones.

LITERATURE REVIEW: Several studies have examined digital banking and customer satisfaction from different perspectives. Sharma and Malviya (2025) found that digital banking significantly improves customer convenience and operational efficiency. Their study highlighted that ease of use and transaction speed were the most influential factors affecting customer satisfaction.

Kaur and Arora (2021) analyzed customer perception towards mobile banking services and observed that security and privacy concerns remain major barriers to adoption, despite high satisfaction levels among existing users.

Singh and Srivastava (2019) emphasized the role of technology acceptance in determining customer satisfaction. The study revealed that perceived usefulness and perceived ease of use have a direct positive impact on customer satisfaction and continued usage intention.

RBI reports (2025) highlighted the rapid growth of digital payment systems in India, especially UPI transactions, and emphasized the need for strengthening cybersecurity frameworks to maintain customer trust. Patel (2022) studied digital banking services in public and private sector banks and concluded that private sector banks performed better in terms of service quality and customer satisfaction due to superior technological infrastructure. The review of literature indicates that while digital banking positively impacts customer satisfaction, factors such as security, reliability, and user awareness play a crucial role. The present study attempts to bridge the gap by examining these factors collectively in the Indian banking context.

Malhotra (2014) examined the factors that influence internet banking adoption. It was found that internet banking is influenced by its perceived reliability, perceived ease of use and perceived usefulness. Nippatlapalli, (2013) examined customer satisfaction as a measure of how products and services supplied by a company meet or surpass customer expectation. Saini, (2013) made an effort to examine the relationship between service quality and customer satisfaction of two private sectors bank of India. Malhotra (2012) found the demographic factors affecting adoption of electronic banking in general and Internet banking in particular in India. The results of this study indicate that age, education, income, and profession are the most influential demographic variables affecting Internet banking usage. It also found that 40 per cent of the Indian consumers who responded to this survey were already using Internet banking services. The results of this study provide interesting additions to knowledge of electronic banking and contribute to our understanding of Internet banking users as well as nonusers. Banks are the back bone of every economy whether developed or developing or underdeveloped. As they design and implement the economic reforms of all kind to support the growth of a nation. Indian banks have witnessed drastic changes from conventional banking to digital banking. The buzzing word in the Indian economy is creating

cashless economy as it will reduce the creation of black money and helps to eliminate the mishandling of cash as well as reduce the corruption. The concept of digital banking was brought in to the industry as the traditional banking was slow, higher transaction cost and was creating a barrier to economic development.

Digital banking is all about development of banking services and delivering products through electronic channels such as ATM's, telephone, internet and mobile phones. The changes in the computer world such as cloud computing, grid computing, mobile computing, IoT's, machine learning and artificial technologies has made it possible for the banks to offer the basic banking services to the customers conveniently and economically to their customers. A digital banking service enables the financial institutions to bring the unbanked population to avail the banking services particularly the people in rural and remote areas. The prospect for digital banking is customers, here the main focus is on the rural population as India is a country with majority of the people belongs to rural areas.

Statement of the problem:

Currently banking industry is witnessing healthy competition in the adoption of new technology. With drastic developments in the information technology and its adoption by the banking industry provision of banking services has become more electronic and online. Digital banking is gaining acceptance from customers and is fast catching up in India. Customers are realizing the comfort of accessing banking services from their convenient places as a result large number of customers have already accepted the concept of digital banking. But at the same time they are facing many risk associated with the digital banking. The current study focus on the extent to which the people in rural areas have accepted the digital banking and the issues they are facing during availing of digital banking services so that the current study may offer some valuable suggestions to the banks to overcome the barriers and offer better services to the customers.

Objectives of the study	
1.	To study the awareness level of customers about digital banking in case public and private banks.
2.	To study the factors affecting the usage of digital banking services among the sampled respondents.
3.	To ascertain the major limitations faced by the respondents in availing the digital banking services.
4.	To suggest improvements in digital banking services of public and private banks.

Hypothesis:

H01: There is no significant relationship between different characteristics of digital banking and the demographic factors of the respondents.

H02: There is no significant relationship between different services of digital banking in public and private banks

RESEARCH METHODOLOGY:

Present study has based on descriptive research design. Survey method was adopted to collect primary data from 400 respondents. Close ended questionnaire was designed to collect the information from the respondents. Likert five point scales was used for obtaining responses. The responses have been collected by means of face-to-face interviews by authors.

This study is to aims at conducted to evaluate and examine the customer satisfaction towards Digital Banking. The purpose of this study is also observed and analyses the purpose of using digital banking, reason for banking digital banking services. Collect data from primary and secondary data collection method. The study includes digital banking services in Hyderabad city. For the analyses the data, we have presented by charts and used percentage method.

Sample size:

In this survey the sample size was 400.

Sampling procedure:

Intercept interview method was adopted for collection of primary data. Respondents were told the purpose of this research and questions were explained to them in case there was any need for understanding any particular question. There had been no personal bias or distortions while recording the responses.

This study has measured the satisfaction levels of users towards the digital services provided by the bank. The finding of study is established that there is a strong positive relationship between consumer and digital banking. In some case the consumers are not satisfied with digital banking services.

Table 4.1 Gender-Wise Classification

S.No	Gender	Frequency	Percentage
1	Male	208	52
2	Female	192	48
Total		400	100

Source: Primary Data

Table 4.1 of the sample population, male respondents make up 52%, while female respondents make up 48%. As a result, it has been found that most Indian families have a male head of household who manages the family's finances, exposing them to digital banking services.

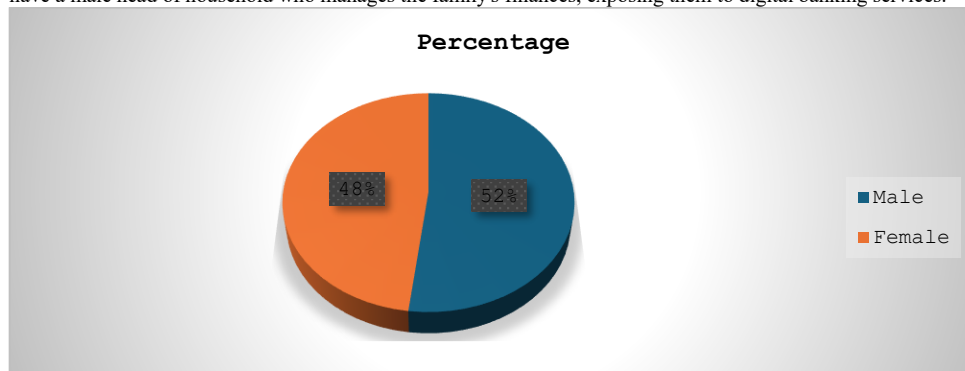


Figure 4.1 Gender details

Age wise Classification

One of the factors that determines the nature of any business is age. Thus, it aids in identifying the age group of customers who are most familiar with digital banking services.

Table 4.2 Age Wise Classification

S.No	Age	Frequency	Percentage
1	Below 20 Years	174	43.5
2	21-25 Years	96	24
3	26-30 Years	60	15
4	Above 31 Years	70	17.5
Total		400	100

Source: Primary Data

Table 4.2 presents that 43.5 percent of the sample respondents are under 20 years old, and 24 percent are between the ages of 21 and 25.30 people, or 15% of the Sample Respondent, are between the ages of 26 and 30.35 respondents, or 17.5% of the sample, are under the age of thirty-one. It might be assumed that young people primarily use digital banking services. as a result of their greater understanding of technological growth.

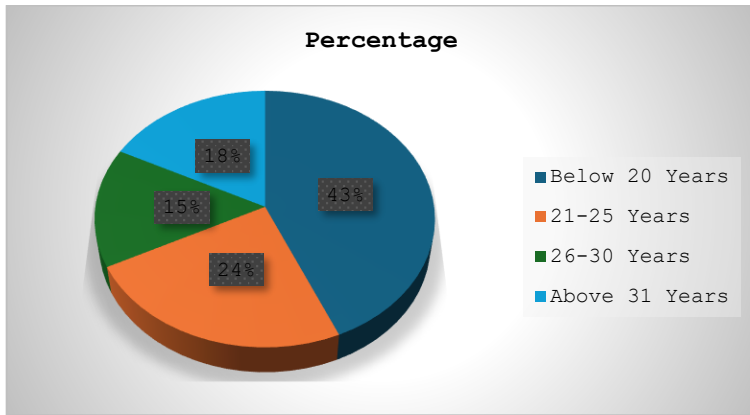


Figure4.2 AgeWiseClassification

Table4.3 Durationofavailingdigitalbanking

S.No	UsageTime	Frequency	Percentage
1	LessThan6Month	120	30
2	6To 12 Month	94	24
3	13To 24 Months	88	22
4	Above24Months	98	24
TOTAL		400	100

Source:PrimaryData

Table 4.3 shows that most sample respondents (60%) use digital banking services for less than six months, and fewest (22%) sample respondents (44) use digital banking services for between 13 and 24 months.

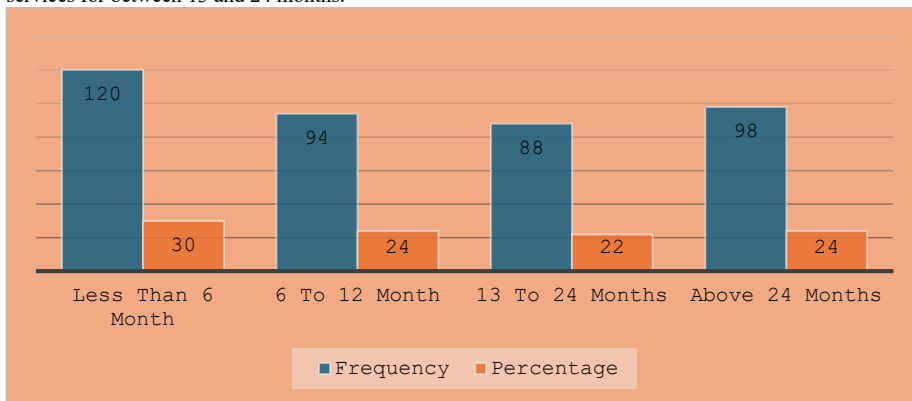


Figure4.3 Durationofavailingdigitalbanking

Table4.4 Modeofusingmobilebankingtransaction

Options	Frequency	Percentage
G-Pay	128	32
Paytm	80	20
MobiKwik	16	04
PayPal	32	08
BHIM	48	12
Amazon Pay	40	10
Phone Pe	56	14
Total	400	100

Source:PrimaryData

INTERPRETATION:

The above table 4.4 represents the mode of using Mobile banking transaction of the respondents which results that 32% of the respondents uses Google pay (G- pay), 20% uses Paytm, 14% uses Phone pe, 12% uses BHIM, 10% uses amazon pay, 8% uses PayPal, 4% uses MobiKwik.

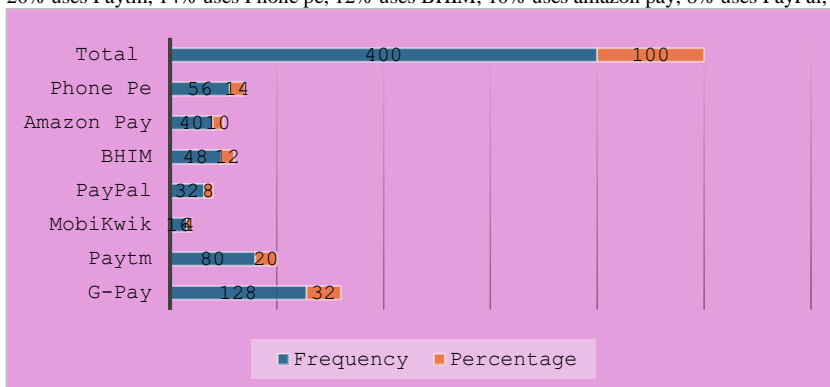


Figure4.4 Modeofusingmobilebankingtransaction

Table 4.5 Factorsinfluencingtousenewtechnology

Options	Frequency	Percentage
Reduces the time of transaction	152	38
Cost effectiveness	56	14
Ease to use	104	26
Friendly technology	88	22
Total	400	100

Source:PrimaryData

INTERPRETATION:

The above table 4.5 represents that 38% of the respondents are using new technology to reduce the transaction of time, 26% feels easy to use digital banking, 32% feels friendly technology and 14% are using because of cost efficient.

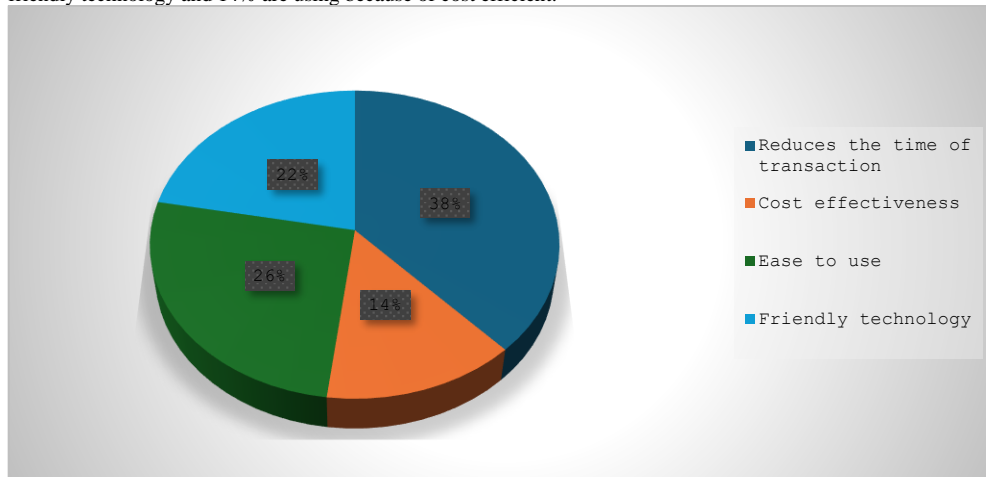


Figure 4.5 Factorsinfluencingtousenewtechnology

Accessstobankaccount

Table 4.6:Accesstobankaccount

DESCRIPTION	NO.OFRESPONDENTS	PERCENTAGE
Publicsectorbanks	232	58.14
Privatesectorbanks	168	41.86
TOTAL	400	100.00

Source:Primarydata

In order to find out the usage rate and issues faced in availing the digital banking services, it is important to ascertain the respondents' association in the banking sector. The study reveals that all the respondents have an active bank account, mere having a bank account does not mean the respondents are using digital financial services but it states that respondents are financially included and have an opportunity to avail the digital banking services. Table- shows that 58.14% of the respondents have accounts with public sector banks and 41.86% with private sector banks.

Table 4.7:Awarenessamongrespondentsaboutdigitalbanking

DESCRIPTION	NO.OFRESPONDENTS	PERCENTAGE
Aware	336	84
Notaware	64	16
TOTAL	400	100

Source:Primarydata

Table 4.7 shows that all the people participated in the study are aware about the digital banking services. Digital banking awareness is high for basic services like UPI (95%) and ATM usage (100%), with strong adoption among younger, educated, and urban users. However, awareness gaps persist for advanced services (e.g., investment, tax payment) and grievance redressal, with security fears, such as fraud, remaining a top barrier to wider adoption.

Usageofdigitalbankingproducts&services;

Table 4.8:Usageofdigitalbankingservices

DESCRIPTION	NO.OFRESPONDENTS
Debit/credit card	118
Internetbanking	92
NEFT/RTGS	54
Mobile wallets	72
UPI	64
TOTAL	400

Source:Primarydata

Now a day's financial institutions offering large many types of attractive and innovative digital products and services to their customer which enable individuals to make financial transaction easily. Effective use of digital services helps customers to great extent. Table 4 shows different type of digital services used by the respondents. Due to the widespread awareness and convenience of UPI payments 64 respondents are using UPI, 72 are using mobile wallets and 118 are using debit card. In this study area UPI system is very popular.

Purposeofusingdigitalbankingservices.

In this day's financial institutions provide different digital banking services and different services can be used for different purposes. The purpose of using digital banking services among the respondents is discussed below.

Table 4.9:Purposeofusingdigitalbankingservices

DESCRIPTION	NO.OFRESPONDENTS
Onlineshopping&payments	156
Fundtransfer	158
Utilitypayment	44
Others	42
TOTAL	400

Source:Primarydata

Digitalization of banking system offering varied services to its customers. In the study it was observed that most of the young people in rural areas are using digital banking for online shopping & payments(i.e. 156 respondents) and for utility payments like electricity bill, water bill, telephone bill/mobile rechargeetc. Usefrequencyofdigitalbankingservices.

Even todaylarge manypeople including youngsters do not howto fill an bank application form/ withdrawal/deposit slips but due to the development in technologypeople are preferring to use digital banking system instead of traditional banking might because of ease of use, connivance or reduced transaction cost. Table4.10:Usefrequencyofdigitalbankingservices

DESCRIPTION	PERCENTAGE
Frequently	75.19
Onceinaweek	14.73
Onceinamonth	6.98
Veryrarely	3.10
TOTAL	100

Source:Primarydata

In this studyit was found thataround 75% of the respondents are using the digital banking service very frequently for one or the other purpose, most of them reported that they are using unified payment interface (UPI) as digital banking service.

Issuesindigitalbankingservices:

Digital banking made it convenient for the individuals to access to banking services without visiting the bank physically. Even thoughthe digital bankingoffering manybenefits to the individuals, many will refuse to accept the digital bankingcompletelyfor several issues faced by them.

Table4.11:Issuesindigitalbankingservices:

DESCRIPTION	PERCENTAGE
Securityrisk	25.58
Lackofknowledge	9.30
Technicalissues	48.06
Threatto privacy	17.06
Total	100

Source:Primarydata

The study reveals that around 48% of the people are facing technical issues while availing the digital banking services. And security risk is another prime concern for the individuals in using the digital services as online banking frauds and incidents ofloss of personal data are increasing nowadays. And very few reported that theyare lacking in knowledge of using digital banking services.

Reliability and Validity:Table 2 shows the result of reliability analysis- Cronbach’s Alpha Value. This test measured the consistency between the survey scales. The Cronbach’s Alpha score of 1.0 indicate 100 percent reliability. Generally any Cronbach’s Alpha scores greater than the 0.07 is accepted as good score of internal consistency Nunally’s (1978). In this case, the score was 0.734 for the digital banking used by the respondents.

Table 4.12: Reliability Analysis-Scale (ALPHA).

Practices/Services	Number of Cases	Number of Items	Alpha Value
Online shopping	100	11	0.734

44% respondents use digital banking of SBI, followed by HDFC bank (16%) Paytm (13%) It indicate that SBI being the oldest and public sector bank is considered as trust worthy and reliable by the respondent for using digital banking. It is also to be noted that Paytm is emerging as new player in digital banking which is generally preferred by young customers.

Table 4.13: Service Providers of Digital Banking

Service provider of Digital banking	Percent
Axis Bank	16.0
Std Chartered Bank	5.0
HDFC bank	8.0
SBI	44.0
Paytm	13.0
Airtel money	1.0
PNB	6.0
Syndicate Bank	3.0
ICICI Bank	4.0
Total	100.0

Hypothesis testing:In order to test the hypothesis and find relationship between different characteristics of customers of digital banking, the bivariate correlation test was employed on the basis of gender, age, education and annual income of the respondents.

Table 4.14: Correlation Matrix

Characteristics of Digital Banking		Gender	Age	Edu	Occupation	Income
Main transaction prefer to do by net	Pearson Correlation	.146	.141	-.253*	.157	-.181
	Sig. (2-tailed)	.146	.163	.011	.120	.071
	N	400	400	400	400	400
Benefit in credit card/debit card uses	Pearson Correlation	-.084	.129	-.120	.251*	-.064
	Sig. (2-tailed)	.408	.201	.234	.012	.524
	N	100	100	100	100	100
safein disclosing details on net while making payments	Pearson Correlation	.106	.128	.070	.137	-.028
	Sig. (2-tailed)	.294	.205	.491	.174	.780
	N	400	400	400	400	400
Aware of typeof digital payment methods	Pearson Correlation	-.102	.082	-.074	-.083	.461**
	Sig. (2-tailed)	.313	.418	.467	.412	.000
	N	400	400	400	400	400
Aware of benefits of digital payment	Pearson Correlation	-.124	.166	-.057	.031	.427**
	Sig. (2-tailed)	.219	.098	.574	.761	.000
	N	400	400	400	400	400
Aware of the benefits of digital payment which are available	Pearson Correlation	-.308**	.052	-.047	-.008	.371**
	Sig. (2-tailed)	.002	.604	.641	.937	.000
	N	400	400	400	400	400
The methods which can be taken up to secure my transactions	Pearson Correlation	-.229*	.084	-.111	.151	.459**
	Sig. (2-tailed)	.022	.404	.270	.133	.000
	N	400	400	400	400	400

bank/institution educate me about the digital payment services being offered	Pearson Correlation	.140	.075	-.029	-.106	.403**
	Sig. (2-tailed)	.165	.459	.778	.293	.000
	N	400	400	400	400	400
prefer net banking instead of visiting my bank every now and then	Pearson Correlation	-.266**	.184	-.221*	.113	.469**
	Sig. (2-tailed)	.007	.067	.027	.261	.000
	N	400	400	400	400	400
satisfied with my bank/institution services post digital payment delivery	Pearson Correlation	-.038	.095	.067	.227*	.272**
	Sig. (2-tailed)	.710	.349	.506	.023	.006
	N	400	400	400	400	400

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Data Analysis for hypothesis H01:The correlation matrix as given in table 4 shows that, there is significant relationship between some characteristics of digital banking and the gender of the respondents. It indicates that gender does have influence on digital banking, hence, null hypothesis (H01) is rejected.

The correlation matrix as given in table 4 shows that, there is no significant relationship between majority of characteristics of digital banking and age of respondents. There is no significant relationship between different characteristics of digital banking and education qualification of respondents except for “main transaction prefers to do by net”, hence, null hypothesis is accepted. However, when we look at educational qualification of majority respondents are either graduate or post graduate and are well aware of different aspects of digital banking.

CONCLUSION:The present study focused to find whether demographic factors such as gender, age, income educational qualification and occupation has any significant relationship with the different characteristics of digital banking. It was found that age, educational qualification and occupation do not have significant relationship with digital banking. It indicates that different age group and occupation of respondents, have similarity in their responses to wards digital banking. It was found that educational qualification, also has no significant relationship in adoption of digital banking because educational qualification of majority respondents are either graduate or post graduate and are well aware of different aspects of digital banking.

Over the last few years with development in technology and the educational level of people the concept of digital banking is very popular even in rural areas. with the continuous efforts of the government in promoting digital banking in the country like demonetization, introduction of UPI system and many other programs have lead to increase in the digital transactions especially after COVID-19 pandemic the number of digital transactions are increased in large scale and helping the country to become a cash less economy. In this study it was absorbed that majority of the rural population are aware of the digital banking and are using the same for only few purposes or to transact in very small amount because of the reasons of security risk, privacy threat and technical issues in rural areas. The concerned authority should take proper measures to overcome the fraudulent activities that the customers are facing.

It was found that gender and income have significant relationship with digital banking. The trend of digital banking had been widely accepted by the customers and they find themselves comfortable in using digital banking. SBI is the most preferred online shopping digital banking platform followed by HDFC bank and Paytm. Most of the consumers prefer digital banking of SBI because of trust and reliability associated with the public sector bank, it is important for the private bankers to match similar level of trust and reliability. Consumers perceived that digital banking saved time and enhanced customers banking experience. Most of the respondents as per the survey agreed to the fact that digital banking provided safe and secure online transactions and encouraged customers to do banking digitally.

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