

Digital Transformation in Banking Practices: An Empirical Investigation of E Wallets

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Abstract

This paper highlights the digital banking practices like payment system adopted by the respondents. Following the enactment of Covid-19, the business community has begun to make greater use of digital payment systems compared to the pre-Covid-19 era. This is mainly due to the fact that people are afraid to go outside. They are afraid of the pandemic that is spreading drastically in the economy. There is a significant increase in digital payment system usage during the pandemic as a large number of people began to use online payment transactions, particularly e-wallet payments. The COVID-19 pandemic shifted people's from traditional to online. For this study, the researcher selected the respondents who use different digital payment methods for their financial transactions through convenient sampling. Varanasi city was selected as the study area for the study. This study was discovered that the respondents' occupation and education position had a direct bearing on their usage of digital modes.

Keywords: Digital economy, E wallet, Banking Practices, Digital transaction modes, banking sector,

JEL Classification: G20, O39

1. Introduction

The COVID -19 pandemic has affected the functioning and performance of businesses and increased the need for noncontact financial products and services (World Bank, 2021). Banking institutions also played an important role in supporting the real sector as they were forced by central banks and governments to absorb the shocks to the economy caused by the pandemic crisis, which affected their profitability and performance (Kozak; Demirgüç-Kunt et. al., 2021; Doran et. al., 2022). The banking sector should develop new digital products or find ways to expand existing products on a larger scale. The financial system is becoming more resilient as banking practices become digitized. One example is the rise of e-commerce platforms, which has been influenced by the dematerialization of financial assets. The payment

system is a very strong indication of digitalization (Harchekar, 2018). The term "digital banking practise" refers to the digitization of all traditional banking services and products that in the past were only accessible to consumers if they were physically present in a bank branch. This includes operations such as cash deposits, withdrawals, and transfers. Making electronic transactions is possible thanks to digital banking services. This can involve utilising a computer to buy products online or a smartphone to buy items in-person. The Digital Payments is one of the technology advances in banking, finance, and business. When we talk about digital payments, we're talking about the technological advancement that makes it possible for us to conduct financial transactions online and avoid obstacles and other problems. With the advent of digital payments, people now have more flexibility when it comes to paying their bills, including taxes, permits, fees, and fines, at odd times and places throughout the year (Swathi et. al., 2022).

1.1 Transformation of India into Digital Economy

Financial technology, popularly known as fintech, has transformed the Indian banking and financial services system since 2008. It has shaped the Indian financial services system in a new way and transformed the traditional banking services system into a modern banking services system. Banking services such as loans, deposits, payment services and remittances have been transformed by digitization. Recently, there has been tremendous growth in mobile banking, use of debit and credit cards, UPI, RTGS, NEFT, IMPS and other digital platforms. The Indian government's demonetization policy in November 2016 and the promotion of digital transactions have also given a boost to digital banking services (Sayed & Sayed, 2020). According to Marcu (2021), banks are now moving towards digital transformation, offering accessible, transparent and user-friendly services at transparent and lower costs compared to traditional services. Tarazi (2020) believes that digitalization will continue to accelerate as conventional or traditional banks are more vulnerable to a sudden decline in lending. A research study examined the factors influencing the adoption of digital wallets and mobile banking among rural customers in Maharashtra, India. The study found that security, privacy, familiarity, trust, prestige, and speed were the most important factors influencing the adoption of digital wallets and mobile banking (Parakh et. al., 2020). Demonetization has had a huge impact on various sectors of the Indian economy and has significantly affected the way individuals conduct transactions in their daily lives. This period really gave a boost to digital money transfer as everyone was suffering from cash shortage at that time (Patra & Gupta, 2020). The Digital India programme was launched by the Indian government in 2015 with the

goal of transforming India into a society and knowledge economy empowered by technology. The initiative focuses on three key areas: digital infrastructure as a basic right for everyone, government and services available on demand, and empowering citizens through technology. Even in the midst of the COVID pandemic, digitization has made excellent progress as it has been driven by instalment payment strategies since demonetization. Payment in instalments was made possible by this particular e-wallet system. In order to get customers to use it, the e-wallet framework has developed a number of different types. It is up to the users of these services to make daily transactions, even for a small fee.

Digitalization will be a key factor in advancing the Indian economy, which is expanding quickly. The market's black money supply can be decreased by digitalization. Additionally, it aids in the regulation of illegal activities that can be carried out quickly with cash. Additionally, a decrease in hard currency will contribute to the prevention of tax frauds, which would increase India's tax revenue. The number of taxpayers in the nation would increase as a result of digital payments.

The users of digital transactions can receive a variety of promotions, coupons, deals, and prizes. This makes marketing for businesses and services simple and successful. Additionally, this increases consumer spending because more people are buying and selling things, which fuels economic growth. Tracking the nation's economic activity is made easier by the statistics. Spending would increase because UPI has no transaction fees or service fees. Customers can pay their phone, TV, power, and other utility bills using the mobile banking and payment apps, which serve as a one-stop payment site. The government has been pushing the industry to ensure that the benefits of the digital wave of banking reach every area of India in a setting that is very consumer-friendly (IBEF, 2022).

1.2 Expansion of Digital Payments

The volume of digital payments is increasing over time in the banking sector. The introduction of electronic payment systems such as automated teller machines (ATMs), point-of-sale devices (POS), electronic clearing service (ECS), national electronic fund transfer (NEFT), real time gross settlement (RTGS), mobile banking systems, debit cards, prepaid cards, check cashing systems, and credit cards have gained wide recognition in Indian banks. These are all remarkable innovations in the digital revolution in the banking sector. Online banking has changed the face of banking and brought about a remarkable transformation in banking operations. The value of transactions through RTGS, IMPS, cards (including credit cards, debit

cards, mobile prepaid instruments, etc.) and mobile wallets has increased dramatically from Rs. 136 crore in 2017-18 to Rs. 174 crore in 2021-22. The table below shows the increase in volume and value of total digital payments:

Table 01: Expansion of Digital Payments (Volume in Lakh, Value in ₹ Crore)

<i>Digital Payment</i>	<i>Volume</i>	<i>Growth Rate</i>	<i>Value</i>	<i>Growth Rate</i>
2017-18	145902		136978311	
2018-19	232602	59%	163713425	20%
2019-20	340155	46%	161968681	-1%
2020-21	437068	28%	141458488	-13%
2021-22	719768	65%	174401233	23%
		<i>AAGR = 45%</i>		<i>AAGR = 2%</i>

Note: AAGR means Average Annual Growth rate calculated by author

Total digital payment includes total RTGS payment, credit transfers, debit transfers, card payments, prepaid payment instruments etc.

Source: Reserve Bank of India

Table 02 : Cumulative Payment Transactions in the last 12 months

<i>Month</i>	<i>No. of Transaction (in Crore)</i>	<i>Growth in % (month on month)</i>
<i>Feb 2022</i>	794.56	
<i>Mar 2022</i>	1744.07	120%
<i>Apr 2022</i>	2765.97	59%
<i>May 2022</i>	3775.31	36%
<i>June 2022</i>	4676.85	24%
<i>July 2022</i>	5657.9	21%
<i>Aug 2022</i>	6724.51	19%
<i>Sep 2022</i>	7849.37	17%
<i>Oct 2022</i>	8993.45	15%
<i>Nov 2022</i>	10046.88	12%
<i>Dec 2022</i>	11198.3	11%
<i>Jan 2023</i>	11297.5	1%



Sources: digipay.gov.in

The Reserve Bank had created a composite digital payments index (RBI-DPI) with March 2018 as the baseline to capture the extent of digitization of payments across the country. The index for September 2021 is 304.06 compared to 270.59 for March 2021. The RBI-DPI Index continues to show significant growth in the adoption and deepening of digital payments across the country.

2. Literature Review

In Rani's (2022) study, a trend in the use of digital payments was noted. Customers in the 25-45 age group use digital payments the most and are fully aware of them. The majority of respondents prefer Phone-Pe and G-Pay over other payment options. The main problems were lack of financial accounts and inadequate internet connection. According to Siew Bee and Yan Ying (2022), digital payment systems increase the number of people using electronic wallets and help the government implement and advance toward a cashless economy. High usage of electronic wallets promotes better environmental and economic development. Bhuyan et al. (2021) stated that between December 2018 and January 2019, the Reserve Bank conducted a pilot survey on the payment habits of individuals in six cities, focusing on awareness and use of digital payments. The survey results show that respondents are largely aware of digital payments, with the convenience of digital payments being the deciding factor. Awareness was similar for men and women. Awareness was positively related to bank account ownership, education level, and user income. Agarwal et al. (2020) conducted a study to assess the impact

of Covid-19 on mobile banking services and switching from physical to mobile banking transactions during Covid-19 and how m-banking could support social exclusion policies. To analyse the literature and understand the theoretical background of mobile banking in India, both before COVID -19 and during COVID 19, secondary data was collected through internet articles on live mint, economic times, RBI reports, magazines, newspapers etc. According to a study by Sathish et al. (2020), people's tendency to stick to traditional payment methods, their concern for privacy, and potential security risks are the main factors behind the low preference for electronic wallets as a payment method. The most important aspect that directly affects user satisfaction and impacts many users' intention to use mobile wallets is trust, as described in the study. Sivasubramanian & Rajendran (2020) conclude that digital payment for small transactions is a real boon for small retailers, especially those engaged in street vending. It creates new opportunities for additional sales and income. It offers several benefits, including the instant transfer of funds by customers and the ease of transferring money to small merchants. Digital payment methods are leading to a shift from cash transactions to digital payments through various channels such as e-wallet service providers, m-wallet, and other payment applications. Krishna & Rajesh (2020) studied the use of e-wallets among working women in urban and remote areas of Thiruvananthapuram district. They found that e-wallets have become a new way to purchase goods and services without moving cash after demonetization and COVID -19. Demonetization combined with government policies to promote the cashless economy has been instrumental in helping e-wallets reach the masses. Thus, online payment applications are used significantly by working women in both urban and rural areas, especially during COVID days. The study by Praveen & Hebbar (2020) highlights the impact of Covid-19 on digital payment systems. After the enactment of Covid-19, the economy started to rely more on digital payment systems compared to the pre-Covid-19 period. Most people were forced to turn to digital. The study by Vijaya & Seethalakshmi (2019) based on a survey of 50 women in Chennai came to a positive conclusion. The response was more in favour of digital transactions, especially women are more adaptable in financial matters. According to Sudha and Sornaganesh (2019), the changes in consumer behaviour after demonetization can be explained. The primary effects of demonetization are an increase in digital currency and a decrease in paper currency. After demonetization, the majority of users used digital cash to pay their bills via mobile apps, internet banking, etc. Shah & Zala's (2018) study made an attempt to understand women's perceptions and awareness of digital payments. The chi-square calculation supported this as there was a significant difference in the perception of women based on age and education. The study shows that women are informed about digital

payments. There is great potential to increase the contribution of youth to this. As most of the respondents perceive digital payment system as easy, convenient and time-saving, it can definitely help women to do their personal and professional work effectively and efficiently. The study will be useful for students, government agencies, policy makers, and future researchers. It is also useful for those who work for the betterment and empowerment of women. Pal et al. (2018) found that cash scarcity increased the adoption of digital payments, but digital payments declined after new banknotes became available. Digital payment adoption depended on the type and volume of transactions, the type of product sold, and personal factors specific to business owners, such as convenience and familiarity with other digital technologies and online transactions. Klapper (2017) Switching from cash to digital payments can increase a business owner's profitability by reducing operating costs and making it easier to manage commercial contracts, delivery receipts, and receivables. Making and receiving digital payments can increase an entrepreneur's participation in e-commerce and improve their interactions with customers, vendors, and financial institutions. Sumathy & Vipin (2017) found that digital payment system brings so many changes in human life. Various forms of digital payments such as mobile wallets are not only used by urban customers but are also popular in rural areas. It is also found that this system has various advantages such as tax avoidance, currency management, fraud and so on.

3. Statement of the Problem

Although the mobile wallet market in India is growing at an incredible rate, players and the industry as a whole are facing some major issues, including: User behaviour remains a major obstacle, as they rely on cash rather than a digital wallet. Customer awareness is still in the early stages. The level of adoption increases with awareness of the technology. Many of today's developing technologies target only young people, so it is important to determine the level of awareness, usage status, and barriers they face. Among the different types of online payments, e-wallet is the one that is gaining popularity nowadays. Few studies have been conducted to investigate the usage status and influencing factors for e-wallet. Therefore, the researcher has tried to conduct this study to measure the awareness, usage and factors influencing the adoption of digital payment methods among users.

4. Research Methodology

The sample population consists of e-wallet users in Varanasi (using at least one e-wallet application). The sample of 30 was drawn from the population. A non-probabilistic sampling

method was used for this study (convenient sampling). The data analysis methods used to test the hypotheses was frequency analysis, chi-square test, and linear regression analysis. All of these analyses were performed using SPSS version 26. For the present study, the researcher used both primary and secondary data to collect the required information. The primary data were collected using a structured interview schedule with closed-ended questions, while the secondary data were obtained from journals, books, and relevant websites. Respondents' answers were analysed using simple percentage analysis, chi-square test, and linear regression.

5. Objectives of the Study

1. To explore sociodemographic factors influencing respondents' use of digital payment methods.
2. To study the usage status of digital transaction modes of the respondents.
3. To analyse the barriers they face in using e-wallet.

6. Hypothesis Development

Based on the researcher's observations, the study developed the following hypotheses:

- i. H0: There is no significant relationship between socio-demographic factors and frequency of using e-wallets.
H1: There is a significant relationship between socio-demographic factors and the frequency of using e-wallets.
- ii. H0: There is no significant relationship between socio-demographic factors and the usage status of digital transaction modes of respondents.
H1: There is no significant relationship between socio-demographic factors and the usage status of digital transaction modes of the respondents.
- iii. H0: There is no significant relationship between socio-demographic factors and barriers faced by respondents in using digital transaction modes.
H1: There is no significant relationship between socio-demographic factors and the barriers faced by the respondents in using digital transaction modes.

7. Results and Discussion

Table 03 shows the profile of the respondents. More than half of the respondents were male (67%) and between 31 and 40 years old (57%). In addition, the majority of respondents have a university degree (30%). Regarding the use of e-wallet (before the pandemic), almost 27%

started using it, but 73% of the respondents used it after the pandemic. Most of the respondents used E-Wallet more than 5 times a month (70%).

Table 03: Profile of Respondents

Sl. No.	Profile of Respondents	Classification	Percent (%)	Mean	Std. Deviation
1	Gender	Male	66.7	.33	.479
		Female	33.3		
2.	Age	18-30	30.0	35.10	9.441
		31-40	56.7		
		41 & Above	13.3		
3.	Education level	Elementary	13.3	3.10	1.185
		High school	13.3		
		Intermediate	33.3		
		Graduation	30.0		
		Post-graduation	10.0		
4.	Occupation	Student	13.3	2.30	.877
		Self employed	56.7		
		Services	16.7		
		Homemaker	13.3		
5.	Use of E wallet	Pre Pandemic	26.7	.73	.450
		Post Pandemic	73.3		
6.	Frequency of use E wallet (in month)	Less than 5	3.3	2.67	.547
		5-10	26.7		
		More than 10	70.0		

Source: Field survey

Table 04 shows that all respondents know about electronic wallets (100%). The majority (90.0%) of respondents are aware of the debit/credit card. Most of the respondents (93%) are aware of Google Pay/Phone Pay and 70% of the respondents are aware of the internet service offered by the banks. It was found that 87% of respondents know about mobile banking and UPI. As shown in table below, 93.3% of respondents use paytm, and the second most popular digital app used by respondents is Google Pay (73.3%). Other popular electronic wallets used by respondents include AmazonPay (20%), Jio Money (6.7%), Freecharge (23.3%), Airtel

Money (40%), Mobikwik (23.3%), and PhonePe (33.3%). Respondents felt that digital transaction forms are very useful and convenient for them. It shows several factors that attract respondents to use electronic wallets, such as ease of use (100%), saving time (100%), and availability of services 24/7 (100%). This was followed by ease of transactions (83.3%), offers and rewards (80%), and recording payment behaviour (83.3%). The barriers faced by digital transaction forms. It was found that the majority of respondents agreed with the statement that they face problems in digital transactions, such as complicated instructions (43.3%), fear of fraud (36.7%), connection problems (33.3%), low trust (16.7%), and lack of products (6.7%), etc.

Table 04: Digital Profile of Respondents

Awareness of Digital modes	Percent (%)
Debit card/ credit cards	90.0
Google pay/ phone pay	93.3
Online Banking (NEFT, ,RTGS,IMPS)	70.0
Mobile banking (various banks apps)	86.7
UPI (BHIM, RuPay, IMPS)	86.7
E-wallets (Paytm, Freecharge, Mobikwik, mRuppee, Airtel Money, Jio Money, SBI Buddy, M-Pesa)	100
Use of E wallet	Percent (%)
Paytm	93.3
Google Pay	73.3
Amazon Pay	20.0
JIO Money	6.7
Freecharge	23.3
Airtel Money	40.0
MobiKwik	23.3
PhonePe	33.3
Factors of Adoption of E wallet	Percent (%)
User-friendly	100
Time savings	100
Ease of transactions	83.3
24X7 Availability of services	100

Offers and Rewards	80.0
Maintain payment history records	83.3
Barriers faced by while using Digital Transaction modes	Percent (%)
Less trust in digital transaction (unsafe, risky, decline of transaction, etc.)	16.7
Do not have products (cards, wallets) or devices (mobile, laptop)	6.7
Lack to knowledge	13.3
Fear of fraud	36.7
Connectivity issues	33.3
Complicated instructions	43.3

Source: Field survey

In order to test hypothesis 1, we used the Chi-square test. There were four independent variables in this study: gender, age, education level, and occupation. The dependent variable was the respondents' use of E-Wallets. There were three categories of use of E-Wallets: less than 5, 5-10 times, and more than 10 times a month. In Table 05, it is very clear that there is a significant difference χ^2 value of 6.99 and p-value is .030 ($p < .05$) between male and female respondents on the frequency of use of E-wallets. There is a higher use of e-Wallets among male respondents (17) than among female respondents (4). It clearly shows that there is no significant difference ($\chi^2 = 3.26$; $p > 0.05$) between respondents of different ages regarding the frequency of using e-wallets. In the table, it is clear that there is no significant difference ($\chi^2 = 8.89$; $p > 0.05$) between male and female respondents regarding the frequency of using e-wallets. The results show that the respondents who have graduated are more likely to use e-wallets. There is a significant difference ($\chi^2 = 15.67$; $p < .05$) between respondents belonging to different professions and the frequency of using electronic wallet. The result shows that self-employed respondents (17) use electronic wallet more frequently than other occupational groups.

Table 05: Relationship between Socio Economic variables and Usage of E-Wallets

Gender	Usage of E wallets	Total	P value
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	Less than 5	5-10	More than 10		Chi- square (χ^2)	
Male	0	3	17	20	6.99	.030
Female	1	5	4	10		
	1	8	21	30		
Age						
18-30	0	2	7	9	3.26	.514
31-40	1	6	10	1		
41 & Above	0	0	4	4		
	1	8	21	30		
Education level						
Elementary	1	1	2	4	8.89	.352
High school	0	1	3	4		
Intermediate	0	4	6	10		
Graduation	0	1	8	9		
Post- graduation	0	1	2	3		
	1	8	21	30		
Occupation						
Student	0	0	4	4	15.67	.016
Self employed	0	3	14	17		
Services	0	2	3	5		
Homemaker	1	3	0	4		
	1	8	21	30		

The chi-square test showed that the hypothesis was accepted for the socio-demographic factors such as age and education level of the respondents, since the p-value is greater than 0.05. However, the null hypothesis was rejected for the gender and occupation of the respondents as the p-value is less than 0.05. Mohan et al. (2021) people of all ages prefer digital banking to traditional banking because it is convenient, widely available, and also saves time and money.

Determinants of Usage of Digital Transaction Modes

Table 06 shows the result of linear regression between the independent variables such as age, gender, education level, use of e-wallet, frequency of use of e- wallet and the dependent variable, namely use of digital modes. The β -values show that the variable education level ($\beta = .758$) has a significant impact on the use of digital modes at the 0.01 level. The importance of demographic factors such as education level was also highlighted in Singh & Rana's (2017) study. They also found that areas/regions with high levels of education, such as major cities, are much more likely to adopt digital payment modes. Another study by Mascarenhas et al. (2020) concluded that demographic variables such as user age, income level, region, time of use, and level of security also influenced continued interaction with fintech services.

Table 06: Determinants of Usage of Digital Transaction Modes

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	16.518	2.588		6.382	.000
Age	-.015	.037	-.071	-.420	.679
Gender	-.642	.619	-.150	-1.037	.310
Education level	.758	.238	.437	3.186	.004**
Occupation	-1.178	.417	-.503	-2.824	.001**
Use of E wallet	-.868	.599	-.190	-1.449	.161
Frequency of use E wallet (in month)	.025	.656	.007	.038	.970

** $p < 0.05$

- a. Dependent Variable: Usage of Digital modes
- b. Independent Variable: age, gender, education level, usage of E wallet, frequency of use E wallet

Similarly, respondents' occupation ($\beta = -1.178$) has a significant negative influence on the use of digital modes at the 0.05 level. Other variables such as age, gender, use of e-wallet, frequency of use of e- wallet have no influence on the use of digital modes.

Concluding Remarks

The use of electronic wallets as a common form of payment is increasing both in terms of accessibility and acceptance. When choosing a digital form of transaction, security, privacy and convenience are the three most important aspects a person considers. Other key factors that impact user usage status are covalency and offers/benefits. In addition, Google Pay and Paytm were found to be the most commonly used. The main barriers to using digital payments were cumbersome instructions and network issues. In addition, respondents' occupations and educational background were found to have a direct impact on how frequently they use digital payments.

Future Research Scope

This study only measures awareness, use, and factors that influence user adoption of digital modes. Future studies could address bankers' perceptions toward digital transactions. The perspective of non-users could be explored to determine the reasons for their lack of acceptance of digital payment systems. A comparative study of users and non-users of digital banking services could be conducted to determine the main reason for adopting or not adopting digital banking services.

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