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Exploring the Impact of Digital Payment Methods: Awareness and Adoption Trends

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ABSTRACT:

The digital age has ushered in a significant transformation in financial transactions, with digital payment methods becoming integral to daily life. This study investigates the awareness and adoption of digital payment technologies among consumers and businesses, aiming to understand the factors influencing their usage across demographics, locations, and economic sectors. The research identifies limited awareness and adoption of digital payment methods as a primary issue, impacting consumer choice, market dynamics, and financial inclusion efforts. The objectives include analyzing socio-economic factors, assessing awareness levels, and examining various digital payment methods. Data collection involves both primary and secondary sources, with a sample size of 50 respondents in Coimbatore city using a questionnaire. The study highlights India's digital payment landscape, showcasing substantial growth in transactions, particularly with convenient solutions like BHIM-UPI. These platforms have not only enhanced citizens' quality of life but also contributed to financial inclusion and economic growth. The study concludes that the ongoing evolution of digital payments aligns with government objectives of a cashless economy and ease of living, reshaping India's financial landscape and benefiting its citizens.

Keywords: Digital Payment method, awareness and Benefits.

1. INTRODUCTION

The advent of the digital age has brought about a transformative shift in the way we conduct financial transactions. Digital payment methods, ranging from mobile wallets and online banking to cryptocurrencies and contactless cards, have become integral to the fabric of our daily lives. As the world progresses towards a cashless economy, it is essential to explore the awareness and adoption of these innovative payment technologies among consumers and businesses. This investigation aims to shed light on the awareness and adoption of digital payment methods across various demographics, geographical locations, and economic sectors. Understanding the degree to which people are aware of these methods and the extent to which they utilize them is critical for multiple stakeholders, including policymakers, financial institutions, businesses, and consumers. In this digital payment landscape, there is a multitude of variables at play. Cultural, economic, and regulatory factors can significantly influence the adoption rates and preferences for specific digital payment methods. Additionally, consumer attitudes, security concerns, and accessibility to digital infrastructure all play pivotal roles in shaping the landscape of digital payments.

Statement of the problem

The problem at hand revolves around the limited awareness and adoption of digital payment methods. While a multitude of digital payment options are available, only a handful are widely known and used. This discrepancy has led to issues such as limited consumer choice, market monopolization, and missed opportunities for innovative solutions. Moreover, it can impact financial inclusion efforts and create security concerns. Bridging the awareness gap and promoting a wider range of digital payment methods is crucial to ensure a more inclusive, competitive, and secure digital financial landscape.

Objectives of the study

- To study about the respondents Socio- Economic Factors
- To study about the awareness of digital payment various methods
- To analyze about various digital payment Method

2. RESEARCH METHODOLOGY

Data Collection

This survey includes both primary and secondary data. Primary data were collected through questionnaire. Secondary data were collected through websites, Journal, Books.

Sampling Design

The survey was conducted among the various digital payment users in Coimbatore city limits. The sample size of the study is 50 Nos. The self-prepared questionnaire is used to find the personal information of the respondents. The sampling technique used for the research is Non-Probability Sampling Method.

3. REVIEW OF LITERATURE

Lakshmi S, Nandhini R G (2024) A Study on the Usage of Digital Payment Interfaces Among Working Women in Bangalore. This study examines the digital payment habits of working women in Bangalore, focusing on their preference for digital methods over cash. Based on primary data from 66 respondents and secondary sources, the research highlights the role of digital payments in providing cost-effectiveness, safety, and convenience. Google Pay was

found to be the most popular and user-friendly method, with 98% of participants aware of digital payment options. Key issues identified include the need for better digital literacy, enhanced privacy, and stronger security measures. The study concludes that while digital payments are efficient and convenient, improving security is crucial for increasing trust and adoption.

Baidulloeva Zuhro Bakhtiyorovna(2023) A Study on the Adoption of Digital Mobile Payment Systems Among Youth in Calicut District. In India's fast-evolving digital landscape, mobile phones are pivotal for facilitating digital payments. This study investigates the adoption of mobile payment apps among the youth in Calicut, focusing on their preferences, challenges, and influencing factors. Analyzing data from 150 users with SPSS, the study finds that UPI and mobile wallets are widely used, with Google Pay being the most popular. Despite their convenience, users face issues such as technical glitches and limited acceptance. The study recommends simplifying app installation processes, improving security measures, expanding merchant networks, and enabling international transactions. Addressing these challenges could significantly enhance the role of digital payments in shaping India's financial future.

Digital payment system in India

The commitment of the Indian government to expand digital transactions has indeed transformed the country's financial landscape. The increase in digital payment transactions from 2,071 crores in FY 2017-18 to 8,840 crore in FY 2021-22, as reported by sources like RBI, NPCI, and banks, demonstrates the substantial growth in digital transactions.

Over the past five years, convenient digital payment methods like BHIM-UPI, IMPS, and NETC have experienced remarkable growth. BHIM UPI has notably risen as the favored choice among citizens, witnessing 803.6 crore digital transactions worth ₹12.98 lakh crore in January 2023. This surge in adoption not only mirrors the shifting preferences of the populace but also underscores the inherent ease and convenience these platforms provide.

The availability of easy and convenient digital payment solutions has not only facilitated ease of living for citizens but has also contributed to financial inclusion and the growth of businesses and the economy. Amidst the pandemic, contactless digital payment solutions such as BHIM-UPI proved instrumental in supporting social distancing measures and maintaining business continuity, particularly for small-scale merchants.

This transformation in the digital payment ecosystem aligns with the government's objectives of fostering a cashless economy, promoting financial inclusion, and ensuring the ease of living for citizens. The ongoing growth and adoption of digital payment solutions in India continue to reshape the country's financial landscape and positively impact the daily lives of its citizens.

The total count of digital payment transactions over the past five fiscal years and the ongoing fiscal year is as follows:

Financial Year (FY)	**Total number of digital transactions (in crore) #**
2017-18	2,071
2018-19	3,134
2019-20	4,572
2020-21	5,554
2021-22	8,840
2022-23	9,192*

* Data till 31st December2022

The total value of digital payments during the last five financial years and in the current financial year are as under:

Financial Year (FY)	**Total value of digital transactions (in lakh crore) #**
2017-18	1,962
2018-19	2,482
2019-20	2,953
2020-21	3,000
2021-22	3,021
2022-23	2,050*

*Data till 31st December2022

Note: Digital payment modes considered are BHIM-UPI, IMPS, NACH, AePS, NETC, debit cards, credit cards, NEFT, RTGS, PPI and others. Source: RBI, NPCI and Banks

The expansion of digital payments in India, alongside the accessibility of user-friendly solutions, has simplified daily life for citizens and fostered financial inclusion and economic growth. Amid the pandemic, the presence of contactless digital payment options like BHIM-UPI played a critical role in promoting social distancing and ensuring uninterrupted operations for small businesses.

The benefits of using digital payments are as follows:

Instant and Convenient Transactions: BHIM-UPI and IMPS enable instantaneous fund transfers, providing a convenient mode of digital payment through mobile phones using mobile numbers or virtual payment addresses. This ease of access and use fosters a swift and efficient transaction process.

Financial Inclusion: Digital payments offer access to financial services anytime and anywhere, reducing barriers for citizens to receive and make payments. This benefits those who were previously limited by the time and costs associated with physically visiting a bank, thus enhancing financial inclusion. Initiatives like UPI 123PAY further extend digital transaction capabilities to feature phone users, aiding financial inclusion in rural areas.

Transparency in Government Payments: Digital payment systems reduce "leakage" and fraudulent transactions, ensuring that government benefits are directly transferred to the intended beneficiaries' accounts, particularly in the context of social security benefits.

Speed and Timely Delivery: Digital payments, regardless of the sender and receiver's location, can be executed almost instantly, unlike cash payments, which are limited by physical movement.

National Electronic Toll Collection (NETC): NETC facilitates electronic payments at toll plazas, allowing seamless travel without the need to halt for toll payments, thanks to Radio Frequency Identification technology.

Bharat Bill Payment System (BBPS): BBPS provides a convenient bill payment service accessible via various channels, enabling citizens to settle their bills using multiple digital platforms like internet banking, mobile apps, and BHIM-UPI.
Enhanced Credit Access: Digital transactions establish a financial footprint for users, thereby expanding access to formal financial services, including credit. Lenders can utilize digital transaction histories for informed lending decisions, aiding both retail and small business lending.

Safe and Secure Transactions: Digital payments in India ensure a higher level of security as multiple authentications are typically required for transactions, reducing the vulnerability to theft associated with cash payments.
These advantages collectively demonstrate how digital payments not only offer convenience and efficiency but also contribute significantly to financial inclusion, transparency in government systems, and the overall safety and security of transactions. The diverse range of digital payment options in India plays a pivotal role in shaping the country's financial landscape and facilitating economic growth.

Various Methods of Digital Payment System
Banking Cards:
Banking cards (credit, debit, prepaid) offer secure and convenient transactions through two-factor authentication (PIN and OTP). Acquiring a card involves KYC, application, PIN receipt, and activation via ATM or a 3-7-day wait. Transactions, with physical or online card use, incur no customer charges for merchant transactions, but banks may impose annual fees and ATM limits. Merchants face 0.50% to 2.25% transaction fees, and credit card cash-outs may cost customers 1% to 3.5%. Versatile usage includes PoS terminals, ATMs, shops, and international transactions across multiple currencies. With 751 banks, the system ensures interoperability, managed by MeitY and hosted by NIC.

Unstructured Supplementary Service Data (USSD)
*99# is a USSD-based mobile banking service for basic phones, promoting financial inclusion. Mini statements, balance checks, and interbank transfers are all made possible by this universally accessible telecom service provider. Supported by 51 banks and GSM providers in 12 languages, it requires linking the mobile number, USSD registration, and obtaining an MMID and MPIN, taking 1-2 minutes. No system charges apply, but there's usually a Rs. 0.50 fee for transactions. Services include balance inquiry, mini statements, and funds transfer with limits varying from Rs. 5,000 per day to Rs. 50,000 annually. Interoperable and managed by MeitY, the service is hosted by the National Informatics Centre.

Aadhar Enabled Payment System (AEPS)
AEPS (Aadhaar Enabled Payment System) facilitates bank-led online financial transactions at PoS (Point of Sale/Micro ATM) through any bank's Business Correspondent (BC) using Aadhaar authentication.

Unified Payment Interface
UPI merges multiple bank accounts in a single mobile app, enabling seamless fund transfers, merchant payments, and personalized 'Peer to Peer' collect requests. Each bank offers its UPI app for Android, Windows, and iOS.

Mobile Wallets

Mobile wallet serves as a digital means of carrying currency, allowing users to connect their credit or debit card details to a mobile application. Money can be added to the digital wallet through online transfers. Instead of relying on physical cards, transactions can be conducted using a smartphone, tablet, or smartwatch. To use a mobile wallet, individuals must link their accounts to load funds. Many banks offer their own electronic wallets, and various private companies, such as Paytm, Freecharge, Mobikwik, Oxigen, mRuppee, Airtel Money, Jio Money, SBI Buddy, itz Cash, Citrus Pay, Vodafone M-Pesa, Axis Bank Lime, ICICI Pockets, and SpeedPay, provide similar services.

Bank Pre-Paid Cards

Individuals undergo KYC to open a mobile wallet account, taking 1-2 days for cards and 5-7 minutes for wallets. Activation involves loading money within limits through branches or internet banking. Transaction costs vary, with loading wallets typically free, and merchants facing fees from 0.50% to 2.50%. Cash-out transactions from cards incur fixed fees or 1% to 2.5%. Funds transfer limits are set at Rs 1,00,000 for users, Rs 50,000 for self-declared merchants, and Rs 1,00,000 for KYC-compliant accounts.

Point of Sales

Point of Sale (PoS) systems operate across various formats, including Physical PoS, Mobile PoS, and Virtual PoS. For Physical PoS, a handheld device with card and/or biometric reader, a merchant bank account, and internet connectivity are essential for service initiation. Transactions can be carried out using any card or through biometric authentication in assisted mode. Mobile PoS relies on smartphones, a bank app, and connectivity, offering flexibility with integrated or external card/biometric readers. Virtual PoS, accessible through smartphones or web browsers, requires an internet connection and an e-payment gateway. All PoS formats may have transaction limits set by banks, with the associated costs varying.

Internet Banking

Internet banking, commonly referred to as online banking, e-banking, or virtual banking, is an electronic payment system that allows clients of a bank or other financial entity to perform various financial transactions using the institution's website.

National Electronic Fund Transfer (NEFT)

NEFT, or National Electronic Funds Transfer, is a nationwide payment system designed for one-to-one funds transfer. This initiative allows individuals, businesses, and corporations to electronically send funds from any bank branch to another individual, firm, or corporate entity with an account at a different participating bank branch across the country. Individuals, firms, or corporates holding accounts at a bank branch can utilize NEFT for fund transfers. Even individuals without a bank account (walk-in customers) can deposit cash at NEFT-enabled branches, with a transaction limit of Rs. 50,000. With twelve settlements on weekdays (Monday through Friday) from 8 am to 7 pm and six settlements on Saturdays from 8 am to 1 pm, NEFT runs in hourly batches.

Real Time Gross Settlement

RTGS, or Real Time Gross Settlement, ensures continuous settlement of individual funds transfers without netting, with transactions processed immediately upon receipt. The system operates with the Reserve Bank of India, making payments final and irrevocable. Primarily designed for large transactions, the minimum remittance through RTGS is 2 lakhs, with no upper limit. RTGS services are available on weekdays from 9:00 am to 4:30 pm and on

Saturdays from 9:00 am to 2:00 pm, subject to variations based on individual bank branch timings.

Electronic clearing System

ECS serves as an alternative avenue for conducting payment transactions related to utility bills, including telephone, electricity, insurance premiums, card payments, and loan repayments. This method eliminates the necessity for paper instruments, enhancing efficiency for banks, companies, corporations, and government departments involved in collecting payments. The adoption of ECS streamlines processes, contributing to improved customer service and overall convenience for both service providers and consumers.

Immediate Payment System

IMPS provides a rapid and accessible interbank electronic fund transfer service, operating 24/7 through mobile phones. It serves as a powerful tool for instant money transfers within Indian banks, utilizing mobile phones, internet platforms, and ATMs. Ensuring both safety and cost-effectiveness, IMPS offers a reliable solution for financial and non-financial transactions, making it a convenient choice for users across the country.

Mobile Banking

Mobile banking is a convenience offered by banks and financial institutions, enabling customers to execute various financial transactions remotely via mobile devices like phones or tablets. This service utilizes dedicated software, commonly known as an app, developed by the respective banks or financial entities. Each bank offers its unique mobile banking app tailored for Android, Windows, and iOS platforms, empowering users to manage transactions efficiently and securely from their preferred mobile device.

Micro ATM'S

The micro ATM is a revolutionary device designed to empower millions of Business Correspondents (BCs) to provide essential banking services at local convenience stores, such as kirana shops. Functioning as miniature banking terminals, these devices will be seamlessly connected to banks nationwide, enabling instant transactions for customers.

Operating through cost-effective mobile phone connections, the micro ATM will be readily accessible at every BC location. Customers will be able to deposit or withdraw funds swiftly, regardless of their bank affiliation, by simply authenticating their identity through their UID. BCs will serve as the frontline banking interface for customers, facilitating transactions directly from their cash drawers.

The primary transaction capabilities of the micro ATM include depositing funds, withdrawing cash, transferring funds between accounts, and checking account balances. With this innovative platform, financial services will be more accessible and convenient for individuals across the country, bridging the gap between traditional banking infrastructure and the needs of local communities.

Descriptive statistics

Table 1 Demographic Characteristics of the respondents

Factor	Variables	No.of Respondents	Percentage	Mean	Median	Mode	Std. D
Gender	Male	28	56	1.4400	1.0000	1.00	.50143
	Female	22	44				
	Total	**50**	**100**				

Age	20-30	23	46	1.9400	2.0000	1.00	1.05772
	31-40	13	26				
	41-50	8	16				
	Above 50	6	12				
	Total	**50**	**100**				
Marital Status	Single	23	46.0	1.5400	2.0000	2.00	.50346
	Married	27	54.0				
	Total	**50**	**100.0**				
Education	SSLC	10	20.0	2.9800	3.0000	4.00	1.13371
	HS	2	4.0				
	UG	17	34.0				
	PG	21	42.0				
	Total	**50**	**100.0**				
Occupation	P.Empl	24	48.0	2.5200	2.0000	1.00	1.68111
	G.Empl	3	6.0				
	Unorga.work	8	16.0				
	House Wife	3	6.0				
	Student	12	24.0				
	Total	**50**	**100.0**				

Demographic characteristics of the respondents are presented in the table 1 Gender Most of the respondents are Male (28) 56% and Female (22) 44%. Age of the respondents is divided into four category 20-30(46%) category Mostly used digital payment system. Marital status 54% of the respondents using digital payment system. Respondents education level is divided into four categories most of them completed their PG (42%). Occupation is divided into five categories Most of the respondents under private employee (48%). In this table value describe Mean, Median, Mode and Standard Deviation.

Chi- Square Test

H0: There is no significant relationship between personal factors of the respondents and awareness of digital payment system

H1: There is a significant relationship between personal factors of the respondents and awareness of digital payment system

The table represents the results of chi-square analysis in terms of personal factors, chi-square value, p values and their significant on source on awareness about the product.

Table: 2 Chi – Square analysis of Personal factor and awareness of digital payment system

Personal Factor	**Chi- Square**	**Significant Value**	**S/NS**
Age	10.886	.284	NS
Marital Status	1.073	.784	NS
Educational qualification	20.512	.015	NS
Occupation	20.186	.064	NS
Annual Income	15.717	.073	NS
Type of family	.559	.906	NS
Earning person of the family	8.207	.513	NS

In the above table indicates that the alternative hypothesis is rejected and the Null hypothesis accepted in all 7 Cases. It is concluded that there is no significant relationship between personal factors of the respondents and awareness of the digital payment system.

Findings

- Majority of the respondents are Male 28, 56%.
- Majority of the respondents age is 20-30,46%.
- Majority of the respondents education level is PG (42%).
- Majority of the respondents under private employee (48%).
- There is no significant relationship between personal factors of the respondents and awareness of the digital payment system.

Suggestions

- Develop targeted educational campaigns and training programs to increase understanding of digital payment options, particularly in rural and underserved areas.
- Invest in advanced security technologies and promote best practices in cybersecurity to protect users from fraud and cyber threats.
- Improve internet connectivity and technological infrastructure, focusing on rural and remote areas, to ensure reliable access to digital payment systems.

4. CONCLUSION

In this paper researcher, reveals that most of the rapid growth of digital payment methods in India, driven by initiatives like BHIM-UPI and IMPS, signifies a shift towards a cashless economy. These methods enhance financial inclusion, transparency in government payments, and convenience for citizens. Benefits include instant transactions, financial inclusion, and enhanced credit access. Various options like banking cards, USSD, AEPS, and mobile wallets cater to diverse needs. Challenges remain in bridging awareness gaps and addressing security concerns. Efforts to improve infrastructure and consumer education are essential. Collaboration between stakeholders is crucial for driving further innovation. Overall, digital payments offer promise for a more inclusive, efficient, and secure financial ecosystem. Continued growth and evolution are expected, benefiting individuals and businesses.

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