NEW HORIZON OF DIGITAL PAYMENTS IN INDIA AND ITS GROWTH

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Abstract : This research paper explores the transformative impact of digital payments on India's economy, tracing the shift from cash to cashless transactions through platforms like UPI and mobile wallets. It emphasizes the convenience and security of digital transactions, showcasing their integration into daily life. Additionally, it highlights the role of initiatives like the DIGIDHAN Mission in fostering widespread adoption and addressing barriers to access, ultimately positioning "Digital India" as a driver of economic growth and prosperity in the digital age

Keywords: India, economic evolution, digital payments, DIGIDHAN Mission, cashless transactions, UPI, mobile wallets, internet banking, transparency, efficiency, Digital India,

INTRODUCTION

In tracing the trajectory of India's economic evolution, the journey from barter systems to digital payments unveils a profound transformation in how transactions are conducted. This transition, marked by initiatives like the DIGIDHAN Mission and the Digital India initiative, underscores a seismic shift towards cashless transactions, driven by innovative platforms such as UPI, mobile wallets, and internet banking. This report delves into the multifaceted implications of this digital revolution, examining its role in combating corruption, fostering financial inclusion, and reshaping the socio-economic landscape of the nation. From the grassroots adoption of digital payments to the catalytic impact on India's technological prowess, this research illuminates the pivotal role of digital payments in driving economic growth and prosperity in the digital age.

Furthermore, exploring the Digital India initiative reveals a strategic roadmap aimed at transforming India into a digitally empowered nation. With nine pillars focusing on broadband connectivity, mobile accessibility, e-governance, and skill development, this initiative underscores a comprehensive approach to harnessing the potential of digital technology for socio-economic progress. By nurturing innovation, promoting electronics manufacturing, and enhancing digital literacy, Digital India aims to empower citizens, spur entrepreneurship, and bridge the digital divide, thereby ushering in a new era of inclusive growth and development.

Delving into the advantages of online payments unveils a plethora of benefits, ranging from enhanced transaction speed and convenience to global reach and cost savings. However, amidst the myriad advantages lie challenges such as technological issues, security concerns, and disparities in digital literacy. Understanding these nuances is crucial for harnessing the full potential of digital payments while mitigating risks and ensuring inclusive access.

Exploring the diverse array of digital payment methods prevalent in India reveals a rich tapestry of options, each catering to specific needs and preferences. From banking cards and mobile wallets to UPI and AEPS, these methods offer flexibility, convenience, and security in conducting financial transactions. Moreover, the evolution of payment systems like NEFT, RTGS, IMPS, and ECS underscores the seamless transfer of funds, facilitating efficient and secure transactions across diverse channels.

Thus, the journey towards a cashless economy in India is marked by innovation, inclusivity, and transformative impact. As the nation navigates this digital frontier, leveraging the strengths of digital payments while addressing challenges is imperative for realizing the vision of a digitally empowered and financially inclusive India.

PURPOSE OF STUDY

- ➢ Explore the relationship between age categories and the adoption of digital payment methods.
- ➢ Investigate how different occupation types influence the choice of digital payment platforms.
- ➢ Review recent initiatives and developments in the field of digital payments.

➤ Fill the gap in existing research regarding digital payment adoption in Noida.

➤ Provide insights into the relationship between demographics, occupations, and digital payment adoption.

➤ Inform policymakers and stakeholders about emerging trends and opportunities in the digital payment landscape.

LITERATURE REVIEW

Papadopoulos (2007) highlights that recent advancements in electronic money (e-money) offer innovative solutions, improved usability, and cost savings. While these technologies have the potential to regulate currency usage and reduce overall expenditure, cash remains the most economical option for small transactions due to its anonymity and widespread acceptance, despite its declining popularity.

Hasan and his colleagues (2012) A research conducted between 1995 and 2009 in the European area found that adopting electronic retail payment systems contributes to overall economic growth by stimulating consumption and transactional practices. Card payments were found to have the strongest link to economic development, followed by credit transfers and direct debits, which are commonly used in retail establishments.

According to the findings of Padashetty and Krishna Kishore's (2013) investigation, the acceptability of digital payment systems, particularly mobile payment, has been impacted by perceived simplicity of use, trust, expressiveness, and perceived usage. However, mobile payment has been particularly influenced by these factors. The use of mobile payment systems in particular has been a big contributor to its development.

David et al. (2018) A study examined the applicability of Distributed Ledger Technology (DLT) in payment and settlement systems. It concluded that DLT has significant potential across various financial sectors, including international payments, asset transfer, secure data storage, and identity management.

K. Suma Vally and Hema Divya, (2018), Demonetization led to a surge in digital payments, supported by initiatives like Digital India. This transition enhances transparency and convenience, boosting the economy. Advancements like digital wallets and UPI facilitate seamless digital transactions. The paper aims to explore the positive impact of payment system digitization.

Ashish Baghla, (2018), The paper discusses India's digital payment trend post-demonetization, aiming to elucidate adoption factors and challenges. It defines digital payments as transactions conducted electronically, emphasizing their promotion for transparency and curbing black money. Despite government incentives, lingering concerns persist among individuals about internet banking and electronic cash. The study seeks to uncover motivations for digital payment adoption and address associated challenges.

Dr. S. Chandrasekaran, (2019), In the current digital era, the widespread adoption of digital payments is fueled by the convenience of online services, making card ownership nearly essential. Advancements in information technology and marketing integration have facilitated this surge in digital payment usage, particularly in online shopping. As individuals prioritize ease and efficiency in transactions, understanding the purposes and factors influencing digital payment usage is crucial in navigating the evolving landscape of online commerce.

Dr. Srihari Hulikal M. (2019), according to the researcher, the study was to look at how people with visual impairments in big cities in India use both cash and digital payments, focusing on services like ride-hailing. They found that these payment methods were hard for the participants to use. They used a theory called "money work" to show the extra effort needed because of this difficulty. This extra work makes it hard for people with disabilities to use digital payments. The study also looked at how ride-hailing services handle payments between drivers and riders, showing that even though these platforms help, there's still a lot of extra work involved.

Dr. Vijith Raghavendra, (2023), The researcher highlights India's adoption of electronic payment methods, including UPI, which has surged in popularity. Using a modified Lotka-Volterra model, the study predicts that UPI will surpass conventional methods in market share and volume, suggesting a scenario where both coexist but UPI becomes the preferred choice.

Dr. Sanjeet Singh and Anjna Devi, (2023), The researcher emphasizes the importance of a digital economy in combating corruption, black money, and counterfeit currency. By analyzing secondary data from RBI reports, the study predicts exponential growth in digital payment modes in India. The findings reveal an average annual growth of 38% in volume and 9% in value, with UPI leading the pack at a remarkable 234% growth rate.

Dr. Kuldeep K. K. , (2024), The researcher investigates the impact of mobile payment systems using a comprehensive analysis of research papers. Examining 784 papers from the Scopus database over the past 15 years, the study employs tools like VOSviewer and Biblioshiny to identify trends, themes, and key contributors in the field. By utilizing the 5W-1H framework, the study offers insights into the current landscape and future directions of mobile payment research. It emphasizes the importance of employing appropriate tools and keywords for accurate results, providing valuable guidance for researchers and practitioners to advance the field further.

Dr. Mona Agarwal, (2024), The study aims to analyze the adoption trends of digital transactions, including UPI, mobile wallets, net banking, and other cards, in India over the past five years. Utilizing data from government sources, quantitative analysis using SPSS 23.0 reveals a significant increase in both volume and value of digital transactions, indicating a transition towards a digital economy. However, limitations such as short-term data availability are acknowledged, highlighting the need for ongoing monitoring to capture evolving transaction patterns. Overall, the study contributes valuable empirical data to understand India's rapid growth in digital transactions.

RESEARCH METHODOLOGY

This study is conducted to obtain the data on adoption of digital payment system in India. The study was conducted in Noida located in Gautam Buddh District of Uttar Pradesh state of India. The method of conducting this study was performed in a quantitative method, by collecting the data.

NEED OF STUDY

- ➢ Growing trend of digital payments adoption
- ➢ Identified research gap in analysing digital payment adoption in Noida
- ➢ Lack of studies on occupational categories and their preferred digital payment modes
- ➢ Absence of analysis on recent government initiatives promoting digital payments
- ➢ Conduct primary and secondary research to fill these gaps and understand digital payment trends in Noida

RESEARCH OBJECTIVES

The research objectives of this paper are divided into two segments of research which are as follows-
PRIMARY DATA RESEARCH
- ➢ Studying the significant relationship of the age category in adopting the digital payments.
- ➢ Studying the significant relationship of different occupation participants in adopting different modes of digital payments
SECONDARY DATA RESEARCH
- ➢ New initiative taken under Digital Payments.

HYPOTHESIS

Hypothesis 1
- ➢ Null Hypothesis (H0)- There is no significant impact of customers age on usage of digital payments.
- ➢ Hypothesis 1 (H1)- There is a significant impact of customers age on usage of digital payments
Hypothesis 2
- ➢ Null Hypothesis (H0)- There is no significant impact of customer's occupation on usage of different modes of digital payments.
- ➢ Hypothesis 2 (H2)- There is a significant impact of customer's occupation on usage of different modes of digital payments.

RESEARCH DESIGN

This study uses hypothesis. It is developed, designed, and evaluated logically, using the Pearson's Chi Squared test. The main aim of this study is to find the significance relationship between the demographic information of age category and their adoption of the digital payments in today's time.

SAMPLING METHOD

The sample size of 200 respondents who actively utilize digital payment services. The questionnaire was filled by 203 respondents by the snowball approach of filling up the form. The form was majorly filled up by the men than females as the adoption of digital payments was more by men than females. Data was collected using a questionnaire and the analysis involves statistical methods including the Chi test as well as graphical representations.

SOURCE OF DATA

Just like in the study, a descriptive research design will be employed as the primary technique of data collecting, with a questionnaire serving as a medium. The question would be constructed with the respondents' degree of expertise about the findings of the study in mind. In the case of the exploratory research design, secondary data will be gathered by combing through accessible research papers, journal articles, and newspapers

- ➢ Examining Method

• Primary sources of data – Here is the main source of a research study & also a questionnaire prepared for this - Survey (Questionnaire) method, Form-Filling, Observation.

• Secondary sources of data – Here are a few sources of information regarding the market & consumer segmentation - Online websites, Newspapers, Articles, Magazines

TOOLS USED FOR ANALYSIS

The following tools are taken into consideration for the analysis of the data gathered via a questionnaire:

- ➢ Microsoft Excel - Microsoft Excel enables users to format, organize and calculate data in a spreadsheet and also in calculating the Chi Square.
- ➢ Calculator – For basic calculation

DATA ANALYSIS

Data analysis is done of both the data- the primary and secondary data. The first is the primary data analysis and then secondary data will follow.

PART- A

PRIMARY DATA ANALYSIS

1. **DEMOGRAPHICS**
   - ➢ **AGE**

AGE	FREQUENCY	PERCENTAGE
18-28	68	33.5%
29-38	51	25.1%
39-48	42	20.7%
49-58	24	11.8%
58+	18	8.9%
TOTAL	203	100%

INTERPRETATION

As per the study, the 33.50% respondents were in the age category of 18 to 28, respondents for the category 29 to 38 were 25.10%, the respondents for the category of age 39 to 48 were 20.70%, the respondents for the category of age 49 to 58 were 11.80% and the rest of 8.90% belong to the age group of 58 plus.

- ➢ **OCCUPATION**

OCCUPATION	FREQUENCY	PERCENTAGE
Salaried	81	39.9%
Self-salaried	44	21.7%
Retired	14	6.9%
Student	55	27.1%
Other	9	5.4%
TOTAL	203	100%

INTERPRETATION

As per the study, the respondents those were salaried were the majority in my study with 39.9%, the respondents as the students who participated in my study were 27.10%, the respondents of self-salaried people were of 21.70%, the respondents who were retired and filled by my form were 6.90% and the participants who volunteered to fill my form in the NGO and who did not do any job fell into the category of others and that was of 5.40%.

2. ADOPTION OF DIGITAL PAYMENTS

➢ USAGE OF DIGITAL PAYMENTS

Do you use any digital payment methods?

OPTIONS	FREQUENCY	PERCENTAGE
Yes	176	86.7%
No	27	13.3%
TOTAL	**203**	**100%**

INTERPRETATION

As per the study, the respondents who use the different mode of digital payments are 86.70%, and the respondent who do not use any mode of digital payments are only 13.30%.

➢ ADOPTION OF WHICH MODE OF PAYMENTS

Which is the most cashless method have you adopted?

OPTIONS	FREQUENCY	PERCENTAGE
Paytm	63	31%
Google Pay	84	41.4%
Phone pe	25	12.3%
Amazon Pay	3	1.5%
Airtel Money	1	0.5%
Others	27	13.3%
TOTAL	**203**	**100%**

INTERPRETATION

As per the study, the respondents who have adopted the different modes of digital payment were asked in the questionnaire to choose which mode of digital payment they have adopted to their daily life. So, the most adopted digital payment is Google pay with 41.40%, then is Paytm with 31.0%, the respondents has also adopted Phone Pay as a mode of payment with 12.30%, the least adopted by people are Amazon Pay with 1.50% and Airtel Money by 0.50%. Respondents who have adopted different platforms like UPI, Net Banking, Rupay etc. fall into the category of others which were of 13.30%.

FINDINGS

Hypotheses Testing Using Chi-square Analysis

A chi-square test is a statistical test used to compare observed results with expected results. The purpose of this test is to determine if a difference between observed data and expected data is due to chance, or if it is due to a relationship between the variables you are studying. Therefore, a chi-square test is an excellent choice to better understand and interpret the relationship between our two categorical variables.

Formula for Chi-Square

$$\chi2=\sum\frac{(O-E)^2}{E}$$

where:

c=Degrees of freedom

O=Observed value(s)

E=Expected value(s)

Hypothesis 1
- **Null Hypothesis (H0)-** There is no significant impact of customers age on usage of digital payments.
- **Hypothesis 1 (H1)-** There is a significant impact of customers age on usage of digital payments

IMPACT DUE TO AGE ON THE ADOPTION OF DIGITAL PAYMENTS	AGE						CHI SQUARED	DF	P-VALUE
	18-28	29-38	39-48	49-58	>58	TOTAL			
YES	33.0%	23.1%	17.7%	9.8%	5.9%	**89.5%**	22.74	4	**0.00014**
NO	0.5%	2.0%	3.0%	2.0%	3.0%	**10.5%**			
TOTAL	**33.5%**	**25.1%**	**20.7%**	**11.80%**	**8.9%**	**100.0%**			

INTERPRETATION

From the above table it is observed that p<0.05, which is the significance value taken in this analysis ($\propto= 0.05$). Thus, the age plays an important role in the adoption of digital payments and proved that this is positively correlated with age.

According to the analysis done by Chi-squared test, since the p value is less than the significance value we reject the Null Hypothesis and accept the Hypothesis 1, if on the other hand the p value comes to be greater than the significance value then we will fail to reject the null hypothesis.

Hypothesis 2
- **Null Hypothesis (H0)-** There is no significant impact of customer's occupation on usage of different modes of digital payments.
- **Hypothesis 2 (H2)-** There is a significant impact of customer's occupation on usage of different modes of digital payments

IMPACT DUE TO OCCUPATION ON THE ADOPTING THE METHOD OF DIGITAL PAYMENTS	OCCUPATION						CHI SQUARED	DF	P-VALUE
	STUDENT	SALARIED	SELF-SALARIED	RETIRED	OTHERS	TOTAL			
GOOGLE PAY	10.8%	17.7%	8.9%	2.5%	1.5%	**41.4%**	31.460	20	**0.049**
PAYTM	11.3%	14.8%	4.4%	0.0%	0.5%	**31.0%**			
PHONE PAY	2.5%	4.9%	3.9%	1.0%	0.0%	**12.3%**			
AMAZON PAY	0.0%	1.0%	0.5%	0.0%	0.0%	**1.5%**			
AIRTEL MONEY	0.0%	0.0%	0.5%	0.0%	0.0%	**0.5%**			
OTHER MODE OF PAYMENTS	2.5%	1.5%	3.4%	3.4%	2.5%	**13.3%**			
TOTAL	**27.1%**	**39.9%**	**21.7%**	**6.9%**	**4.4%**	**100.0%**			

INTERPRETATION

From the above table it is observed that p<0.05, which is the significance value taken in this analysis ($\propto= 0.05$). Thus, the customer's occupation plays an important role and also justifies the positively correlated with the different mode of digital payment adopted by different occupational people.

According to the analysis done by Chi-squared test, since the p value is less than the significance value we reject the Null Hypothesis and accept the Hypothesis 2, if on the other hand the p value comes to be greater than the significance value then we will fail to reject the null hypothesis.

PART-B
SECONDARY DATA ANALYSIS
INITIATIVES TO GENERATE AWARENESS OF DIGITAL PAYMENTS
The generation of awareness among users and merchants has been a key focus area for the growth of digital payments in India and the DIGIDHAN Mission. The table below summarizes key initiatives undertaken by the government, allied bodies, and private players to cement awareness of digital payments among various target segments.
A. RESERVE BANK OF INDIA-
1.**Har Payment Digital** - RBI Governor Shaktikanta Das launched the "Har Payment Digital" mission on March 6, 2023, during Digital Payments Awareness Week 2023. The theme, "Digital Payment Apnao; Auron ko Bhi Sikhao" encourages both adoption and teaching of

digital payments. With India's monthly transactions exceeding 1,000 crores since December 2022, the mission aims to enhance awareness and usage, emphasizing ease and convenience.

2.Electronic Banking Awareness and Training (e-BAAT) - The RBI conducts regional programs to promote digital payments, especially in rural areas. These sessions cover safe digital practices, cyber hygiene, and grievance redressal. They target a diverse audience, including bank staff, government officials, students, farmers, and the general public. Since 2019, 869 e-BAAT programs have been conducted, contributing to digital payment education and outreach efforts.

3.RBI KEHTA HAI - Under 'RBI Kehta Hai', the RBI conducts multi-channel awareness campaigns emphasizing vigilance in digital transactions. These campaigns cover topics like mobile banking, ATMs, and internet banking to prevent digital fraud. They include themes such as digital banking convenience, transaction limit settings, and safety measures. Advertisements in major newspapers aid in reaching diverse linguistic and demographic segments, promoting safe digital banking practices.

B. MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY (MeitY)

The Ministry of Electronics and Information Technology in India oversees policies and initiatives for digital advancement, including E-Governance, IT services, and cyber laws. It promotes internet connectivity, semiconductor manufacturing, and IT education, fostering a comprehensive digital ecosystem. Through bodies like the Digital India Corporation, it addresses the digital divide and standardizes IT practices, ensuring progress in India's digital landscape.

1.DigiShala- "DigiShala" is a dedicated TV channel that promotes digital payments and targets the rural and poor segments through multilingual resources. With a dedicated target base of 20 million families, the Doordarshan channel has continued to broadcast the content in periodic cycles throughout the year since 2016.

2.PMGDisha- Launched in 2017, it sought to bridge the digital divide by imparting digital skills through multilingual content and 20-hour training modules, with a special emphasis on digital payments. As of January 2024, the program has enrolled more than 73.6 million candidates and trained 63.5 million candidates since its inception.

3.Azadi ka Digital Mahotsav - The "Digital Payment Utsav" event will host panel discussions with dignitaries from RBI, DFS, MeitY, NPCI, SBI, ICICI/HDFC, PCI, PhonePe, and PayTM on 'DigiPay: Vision 2030'. It will include startup presentations, cultural activities, and the launch of the 'Chutki Bajake' Anthem. The event will also introduce incentive schemes like PM SVANidhi and BBPS. Awards will be presented to outstanding bankers and fintech companies, concluding with remarks by Hon'ble Minister of State of Electronics & IT, Shri Rajeev Chandrasekhar.

C. PAYTM- The "G20-Stay Safe Online" campaign in collaboration with MeitY (2023)- The campaign promotes cyber hygiene and security by educating the masses about online risk and safety measures through its website. From February 2023 to September 2023, more than 24 physical participatory workshops, sessions, online quizzes, and competitions were conducted nationwide.

D. GOOGLE PAY- NASSCOM's Data Security Council of India (DSCI) and Google Pay launched the "Digital Payment Abhiyan" in collaboration with MeitY (2019) – The campaign aimed to educate customers on the benefits of making digital payments and urge them to adopt security and safety best practices. The Google India YouTube channel has 38 videos on digital payment modes, which reached 500+ million views by January 2024.

E. National Payments Corporation of India (NPCI)- NPCI, an initiative of RBI and IBA under the Payment and Settlement Systems Act, 2007, operates retail payment and settlement systems in India, fostering a robust infrastructure for payments and settlements.

- ➢ **DigiSaathi-** DigiSaathi, inaugurated by RBI Governor Shri Shaktikanta Das, is a 24x7 helpline initiated by NPCI. It provides information on digital payment products and services. The automated response system, developed by a consortium of payment system operators and participants, offers assistance in multiple languages through its website, chatbot, and toll-free calls. With availability in ten languages, including English, Hindi, Marathi, Kannada, Tamil, Bengali, Telugu, Gujarati, Punjabi, Malayalam, Odia, and Assamese, DigiSaathi ensures accessibility and inclusivity for users across diverse linguistic backgrounds.
- ➢ **UPI CHALEGA 3.0-** UPI Chalega 3.0 aims to drive UPI adoption and safe usage through engaging initiatives. The campaign aims to boost UPI's brand awareness, amplify understanding of its features, and encourage wider adoption among new users.

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