

CONSUMER ADOPTION OF DIGITAL PAYMENT MODES

By Taruna Makhija

Abstract

On 1st July, 2015 Prime Minister Shri Narendra Modi launched the “Digital India” campaign to ensure increased online infrastructure and internet connectivity. The plan aimed to connect even rural areas with high speed internet networks. It aimed to transform India into a digitally empowered nation and knowledge economy. “**Fearless, Paperless, Cashless**” is one of the professed role of Digital India. To understand the perception and level of adoption of digital payments, primary data was conducted from 350 respondents from Mumbai and Mumbai suburbs. ANOVA and Descriptive Statistics has been used to analyse the responses. ANOVA indicated influence in consumer adoption of digital payments, based on various demographics factors. Also, a comparison has been made of the transaction values of digital payments in India and major economies of the world.

Keywords

Consumer, Digital Payment Modes, Adoption

Introduction

Digital payment means an electronic payment system for payment of goods and services, instead of using cash or cheque, in person or by mail. Digital payment is a manner of payment which is made through digital modes. No hard cash is engaged in digital payments. All the transactions in digital payments are concluded online. It is a quick, speedy and convenient way to make payments.

Adoption of Cashless economy has been propagated on a large scale by our Prime Minister Shri Narendra Modi. With the ever increasing number of smart phone users in the country, which hit approximately 337 million by 2018, it is very essential to capitalize on this ever increasing smart phone using population and inculcate the usage of cashless payment methods among the people of the country. The Digital India initiative was one major initiative launched to help India become a cashless economy. The number of smart phone users in India would arrive to 490.9 million by 2022. In 2018, India had 483 million internet users, which is estimated to develop to 525.3 million by 2019. This figure is projected to increase to 666.4 million internet users in 2023.

The increasing smart phone market and the escalating internet users in the country provide a good groundwork for Prime Minister's dream of India becoming a Cashless economy. As part of encouraging cashless transactions and switching India into cash-less society, a choice of modes of digital payments are available.

Modes:

- BANKING CARDS (DEBIT / CREDIT / CASH / TRAVEL / OTHERS)
- UNSTRUCTURED SUPPLEMENTARY SERVICE DATA (USSD)
- AADHAAR ENABLED PAYMENT SYSTEM (AEPS)
- UNIFIED PAYMENTS INTERFACE (UPI)
- MOBILE WALLETS
- BANKS PRE-PAID CARDS
- POINT OF SALE
- INTERNET BANKING

- MOBILE BANKING
- MICRO ATMS

NEED OF STUDY

With the increase in the modes of digital payments and more emphasis being laid on cashless economy, it is important to understand the consumers' view on these digital payment methods. Through this paper an attempt is made to understand the level of adoption of digital payments in India.

OBJECTIVE OF STUDY

The objective of the paper is to understand the level of adoption of digital payment modes of consumers and their view about the various attributes of digital payments.

- To understand the overall adoption of respondents about digital payment modes.
- To understand the level of convenience faced by respondents.
- To understand the perception about the security of digital payment modes.
- To understand the frequency of digital payment usage of the respondents.
- To understand the influence of demographic factors on use of digital payments.

Hypothesis

H₀: There is no impact of demographics on the use of digital payment modes.

H₁: There is impact of demographics on the use of digital payment modes.

Research methodology

Research Design

The research paper tends to engage descriptive research.

The Sample

Also, primary data as in the form of convenience sampling has been used as well as secondary data has been taken for analysis. The research has been conducted in the area of

Mumbai suburbs. A sample size of 350 has been taken for the purpose of research. Information has also been collected from various websites, articles and E- Journals.

Review of literature

- Nimish Vohra and Kingshuk Hazra (2018) in their paper “The state of E-wallets and digital payments in India in 2018” conducted a survey in the last quarter of 2017 in Indian metros – Mumbai, Delhi- NCR, Kolkata, Bengaluru, Hyderabad, Chennai, Ahmedabad, Pune, Jaipur, Indore, Lucknow & Ranchi. The paper studied the **frequency, preference**, growth spending etc. of various digital payment modes.
- N. Ramya , Dr. S.A. Mohamed Ali (2018) in the paper “A Study On Public Awareness And Level Of Adoption Of Various Modes Of Cashless Transaction” analysed the **awareness** about the cashless transactions and its **modes, its adoption, risk** and steps taken for implementing cashless economy.
- Determinants of Customers’ Acceptance of Electronic Payment System in Indian Banking Sector – A Study (2014) – a paper by Sanghita Roy, Dr. Indrajit Sinha, studied the factors for contributing growth of E- payment system to be innovation, incentive, **customer convenience** and legal framework.
- Vivek Kumar Singh, Shubham in their paper “**Security in Digital Payment**” (2017), conveyed that the Government and RBI as well as cyber security of India must be improved by updating the cyber security framework.
- Dhani Shanker Chaubey & Piyush Kumar, “Demonetization And Its Impact On Adoption Of Digital Payment: Opportunities, Issues And Challenges” (2017) spoke about various benefits of digital payments and **time saving** being one of them.
- Prasad Rajendra Byakod , Chaya U. , Pooja Kulgude , Abhishek Sharma , Priyanka Singh and Chandra Sen Mazumdar in their paper “ A Study on Penetration of Digital Payment System in Selected Areas of Rural Karnataka” studied about the **technical infrastructure** for digital payment systems in selected areas.\
- “Demonetization And Its Impact On Adoption Of Digital Payment: Opportunities, Issues And Challenges” by Piyush Kumar and Dr. Dhani Shanker analysed about various opportunities, issues and challenges for digital payments and **transaction fees or charges** being one of them.

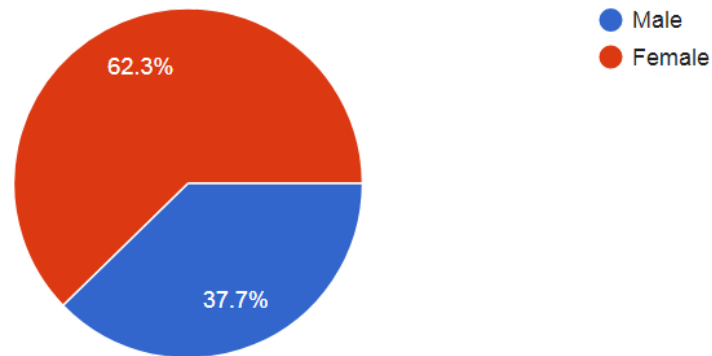
- Shamsheer Singh & Ravish Rana (2017) Study Of Consumer Perception Of Digital Payment Mode in their paper found out various factors for usage of digital wallets, one of them being better discounts or rewards available to them.
- Mohammad Salman, Imran Saleem (2017) in the paper “Role of Digital Competence in Cashless Economy” talk about the role of digital literacy as an essential element for cashless economy. They found out theoretical supports and evidences to understand the relationship between **digital literacy** and use of digital payment modes.
- Vidya shree DV, Yamuna N, Nithya Shree G in their paper “A Study on New Dynamics in Digital Payment System – with special reference to Paytm and Pay U Money” studied about the basic features of digital payments, growth of Paytm and PayU and the benefits on such use explaining about **refund the account, refund to wallet, satisfied with coupons, cash back and offers.**
- Dorothy Sagayarani in her paper “Digital Payments In India” talked about the various digital payment mechanisms available in India, the payment system, uses of Digital payment system with emphasis on no cost of printing cash, saves money and time and curb on **black money**, which also being a reason for not using digital payments by the consumers.

Data analysis

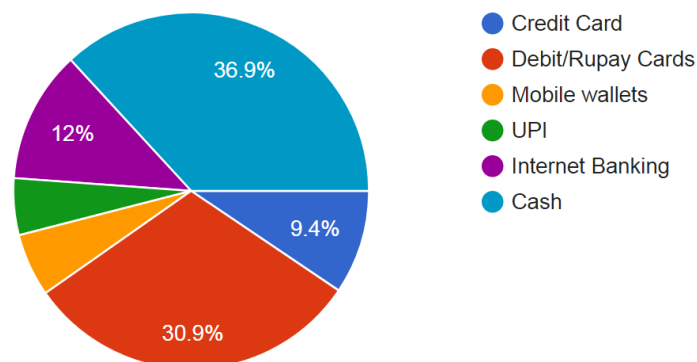
A survey was collected from 350 individuals which comprised of:

Male	132
Female	218
Total	350

Pie-Chart for Gender of Respondents

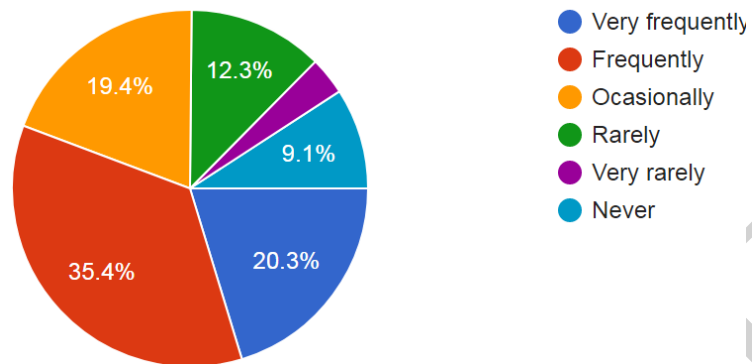


Pie-Chart showing preference of respondents towards payment methods



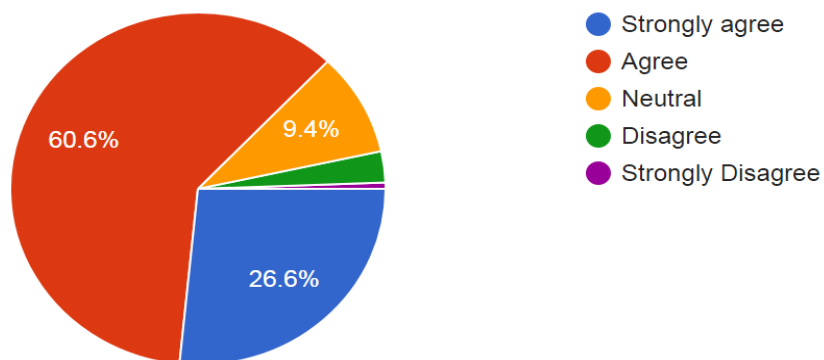
As seen from the above figure out of all the respondents, 36.9% mostly prefer cash as the payment method whereas the remaining 63.1% mostly prefer any one or the other digital payment methods.

Pie-chart showing frequency of respondents of use of Digital payment modes



From the diagram it can be seen that 20.3% of the respondents opt to use digital payment modes very frequently and 35.4% of the respondents frequently used digital modes for making payments. Only 9.1% of the respondents have never used digital payment modes.

Pie- chart showing Convenience of Digital Payment Modes



It can be seen from the above diagram that majority of the respondents i.e. 87.2% (60.6% + 26.6%) have positive response for convenience of use of digital payment modes.

Gender wise anova

Null Hypothesis: Gender does not influence the perception or adoption of digital payment modes.

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	1866.252	11	169.6593	213.809	0.0000	1.790929
Within Groups	3323.214	4188	0.793509			
Total	5189.466	4199				

Source: Primary Data .S – Significant at 5% level (p value \leq 0.05); NS – Not Significant at 5% level (p value $>$ 0.05)

As the p value is less than 0.05, the null hypothesis is rejected. It means that gender of respondents influences the perception or adoption of digital payment modes.

Age wise anova

Null Hypothesis: Age does not influence the perception or adoption of digital payment modes.

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	1101.728	11	100.1571	103.1069	0.00	1.790929
Within Groups	4068.186	4188	0.971391			
Total	5169.914	4199				

As the p value is less than 0.05, the null hypothesis is rejected. It means that age of respondents influences the perception or adoption of digital payment modes.

Gender wise average score analysis

Gender wise Average score analysis				
Var code	Male 1	Female 2	Total	
PG1	132	218	350	
V01	→ 3.91	↓ 3.33	→	3.55
V02	↓ 3.16	↓ 3.33	↓	3.26
V03	↑ 4.17	↑ 4.04	↑	4.09
V04	→ 3.72	→ 3.68	→	3.70
V05	↑ 4.46	↑ 4.48	↑	4.47
V06	↓ 3.47	↓ 3.34	↓	3.39
V07	↓ 3.02	↓ 2.96	↓	2.98
V08	→ 3.95	→ 3.81	→	3.86
V09	↓ 3.22	↓ 3.32	↓	3.28
V10	→ 3.74	→ 3.47	→	3.57
V11	→ 3.55	↓ 3.28	↓	3.39

From the above table it can be seen that variable 05 i.e. Time Saving of has the highest positive response, followed by variable 03 i.e. Convenience has the next positive response.

Overall Average Score Analysis

Overall Average Score Analysis									
Variable	Strongly Agree score	Agree score	Neutral score	Disagree score	Strongly disagree score	Total score	Grant Max score	Grant Min score	Average Score
V01	355	496	333	24	32	1240	1750	350	5.77
V02	145	532	306	158	7	1148	1750	350	5.34
V03	465	848	99	20	2	1434	1750	350	6.67
V04	235	752	240	66	2	1295	1750	350	6.02
V05	910	612	33	6	1	1562	1750	350	7.27
V06	95	648	324	118	2	1187	1750	350	5.52
V07	135	324	303	262	10	1034	1750	350	4.81
V08	425	712	135	70	7	1349	1750	350	6.27
V09	155	584	261	148	12	1160	1750	350	5.40
V10	235	672	249	94	5	1255	1750	350	5.84
V11	195	520	345	126	3	1189	1750	350	5.53

- As per majority of the respondents, Digital payments save time Variable 05.
- Respondents also believe in Variable 03 i.e. digital payment modes are convenient to use.
- Variable 08 i.e. rewards and discounts being an attraction for using digital payment modes is the 3rd is answered positively by respondents.

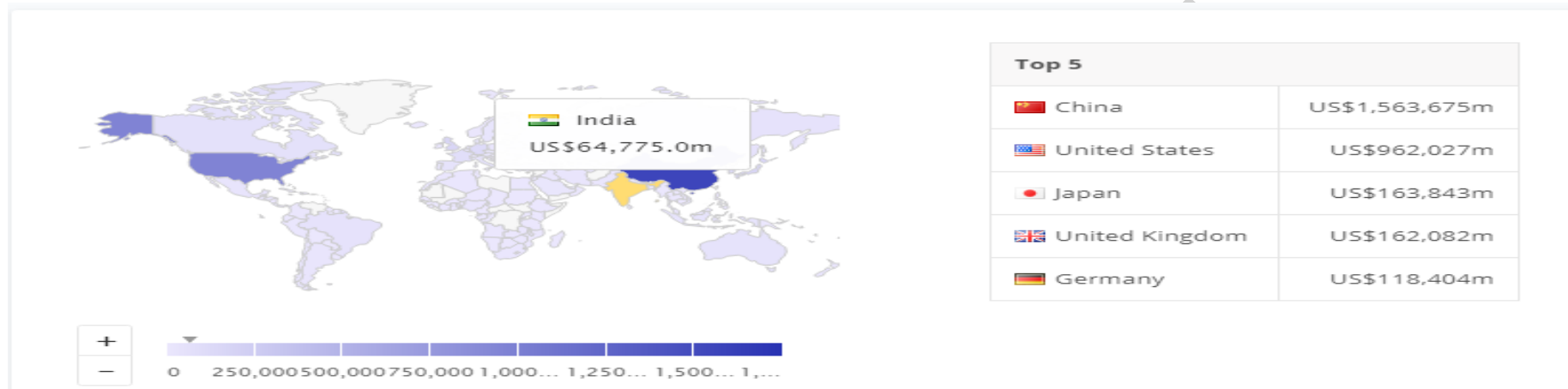
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Correlation Analysis

	v1	v2	v3	v4	v5	v6	v7	v8	v9	v10	v11
v1	1										
v2	↓ 0.0178	1									
v3	→ 0.2488	→ 0.1784	1								
v4	→ 0.1906	→ 0.181	↑ 0.4662	1							
v5	→ 0.1772	→ 0.0591	↑ 0.2856	↑ 0.2631	1						
v6	→ 0.1544	→ 0.2562	↑ 0.2754	↑ 0.2661	→ 0.1369	1					
v7	↓ -0.008	↓ 0.016	↓ -0.08	↓ -0.164	↓ -0.092	↓ -0.132	1				
v8	→ 0.0754	↓ -0.014	→ 0.1771	→ 0.1298	→ 0.0922	→ 0.0453	↓ -0.106	1			
v9	→ 0.0985	→ 0.234	→ 0.1075	→ 0.2025	→ 0.0991	↑ 0.3601	↓ -0.106	↓ 0.0235	1		
v10	→ 0.2063	→ 0.0463	→ 0.2184	↑ 0.2805	→ 0.2003	→ 0.2057	↓ -0.12	→ 0.1524	→ 0.1841	1	
v11	→ 0.1099	↓ -0.041	↓ 0.0361	↓ -0.019	↓ -0.026	↓ -0.016	→ 0.2485	→ 0.08	↓ 0.001	→ 0.0841	1

Variable 03, Convenience and Variable 04 Security are the most correlated variables followed by **Variable 06, technological infrastructure and Variable 09 technological literacy** are correlated.

Worldwide Comparison of transaction values in Digital Payments.



The above picture says that China has the most Digital payment transactions summing up to US\$ 1,563,675 million followed by the US and Japan. India on the other hand has transactions worth US\$ 64,775 million only till 2019. Being the second largest population in the world India still has a long way to go to become cashless or paperless economy. The technological infrastructure and literacy should be improved in India for the same.

Findings and discussion

- It is found that the respondents have positively adopted to digital payment modes.
- Majority of the respondents find believe that use of digital payment modes saves time.
- Respondents also find digital payment modes easy and convenient to use.
- Along with convenience, respondents also believe that digital payment modes are secure.
- It is found that respondents believe that technological infrastructure and literacy is still not to the mark.
- Discounts, rewards and additional benefits act as major influence for respondents to use digital modes.
- As compared to the world, India has only US\$ 64,775 million worth transaction value of digital payments whereas China has the highest i.e. US\$ 15,63,675 million.

Suggestions

Though people have adapted to digital and online payment modes favorably, technological infrastructure i.e. 24/7 internet connectivity, networking, proper and secure operating systems etc. still needs to be developed in the country.

Digital payments have been accepted in the urban areas but still are far from the reach of the rural population.

In order to improve the digital payments scenario in India, technological infrastructure and technological literacy should be improved. Also people in the rural areas must be made aware of such payment methods.

With India still having wide scope for improvement for volume in Digital payments

Transactions, further study can be conducted in analyzing major factors for less penetration as compared with the other world economies.

Conclusion

The research involves the analysis of a sample of population on their adoption of digital payment modes. According to the findings, the respondents find digital payment modes easy, convenient and secure to use. They also believe that digital payment modes save time. Also,

efforts should be taken to improve the technological infrastructure in the country and improve the technological literacy to ease and popularize digital payments more.

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Bio

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