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### RESEARCH ARTICLE

#### IMPACT OF DIGITAL WALLETS ON CONSUMER BEHAVIOR IN INDIA

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#### Abstract

In today's tech-driven world, digital wallets such as Paytm, GPay, MobiKwik, and so on, are gaining immense popularity among consumers. With economies becoming digital as more and more consumers opt for computerized alternatives to the traditional leather wallet, the industry has become a profitable base for potential investors. In India, specifically, the growth of digital wallets has been propelled by the demonetization policy, which significantly reduced the volume of currency in circulation, implemented by the government in 2016. One of the major consequences of an increase in the popularity of digital wallets has been a shift in the behaviors and spending habits of consumers, particularly in India, where the transition to a cashless economy has been considerably rapid. The goal of this study is to assess the apparent impact of the transition to digital economies on consumer behavior, and the various factors associated with this shift. This assessment was made by surveying users of digital wallets, between the ages 18 and 65, to seek their responses on how shifting to digital wallets has impacted them, their spending habits, etc. The responses were closely analyzed and interpreted to come to a conclusion.

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#### Introduction:-

Many factors have contributed to the growing popularity of digital wallets among consumers, thus pushing economies towards the digital front. The most important factor remains convenience. Since transactions can be done via a single tap on one's mobile phone, many consumers have begun to adopt digital methods of payment. Related to convenience is another factor that has influenced the recent trends, i.e. the speed of transactions. Both of these factors together are a testament to the ability of these applications to transact money more efficiently. Further aggrandizing the wide range of capabilities of these digital wallets, it has been noted that consumers prefer digital wallets due to their ability to keep a record of their spending history. Thus, consumers tend to spend more wisely although there has been an overall increase in consumer spending following the advent of online payment methods. Since the 1970's there has been a continuing debate on whether credit card usage encourages spending or not, and the evidence has been increasingly pointing to the affirmative. In other words, there is growing evidence that credit cards stimulate spending. This is referred to as the "credit card effect" and Feinberg (1986) described credit cards as a "spending facilitating stimuli". He suggested that "credit card stimuli" give rise to behaviors that intensify one's natural impulse to spend (more). One of the reasons why this happens is that "payment modes such as credit cards do not have the cash outflow vividness, therefore attenuating the pain of payment that one experiences while in a paying transaction" (Braga, et al.).

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When talking about consumers' newfound preference for digital wallets, specifically in India, it is important to mention demonetization as it provided the digital payment industry a shot in the arm that it so badly needed. On 8 November 2016, Prime Minister Narendra Modi took a revolutionary step by declaring that the notes of denominations 500 and 1000 were declassified as legal tender and that they would no longer be valid for transactions. Over the next few months, all Indian citizens queued up outside banks to get the old notes exchanged for the new ones. The primary objectives of this unprecedented move were to tackle corruption (mostly by government officials who took bribes), weed out black money, counter terrorist financing, and halt the circulation of counterfeit currency notes in the economy. Additionally, the government also hoped to hasten India's transition to a cashless economy. Although it descended the country into chaos for a couple of months following its declaration and also wiped out 86% of India's currency besides other negative economic and social consequences, it also had some positive impacts, the most important being providing an ideal base to encourage the growth of and investment in the digital payment industry. The Government of India also collaborated with private companies, such as Paytm and Mobikwik. As per the Watal Committee Report, released and submitted to the Ministry of Finance in December 2016, only 20% of total transactions and 5% of Personal Consumption Expenditure were happening digitally. Data released by the RBI reveals that between the financial years 2015-16 and 2019-20, digital payments across India increased at a compound annual growth rate of 55.1%. The RBI Governor, in January 2020, claimed that this increase in the volume of digital payments has led to digital payments accounting for 97% of daily payment volume.

Although there has been a boom in the digital payment industry, what is needed now is the benefits to reach the underprivileged sections and financially backward sections of the society, particularly those residing in the rural areas. "As of August 2016, there were 931 million active mobile subscriptions in India, which is over 74% of India's population, whereas 52.8% of the population had access to financial institutions as of 2014" (Watal, et al.). This shows that, although financial inclusion is a major challenge to policymakers, the growth of digital payments can significantly reduce financial disparity. "This boom in digital payments is indicative of a larger paradigm shift in the ease of access to financial services." (Pandey). Through technological innovations and technology-led payments solutions, we can ensure the delivery of efficient and more inclusive financial services. The government has already taken steps to achieve this objective. By providing a unique digital identity Aadhar and building the Jan-Aadhar-Mobile (JAM) and Universal Payment Interface (UPI) platforms to people who did not even have their bank accounts, the government has laid the foundation for greater financial inclusion. The Reserve Bank of India (RBI) in its report 'Vision 2018' claims that a four-pronged strategy to adopt digital payments in India, which includes regulation, robust infrastructure, effective supervisory mechanism, and consumer centricity, has been adopted. Some more important and major enablers of the 'digital payment revolution' in India include "increasing availability of mobile phones, availability of data network infrastructure, rollout of 3G and 4G networks, and large merchant ecosystem." (Singh & Rana).

Despite overarching positive economic consequences of and personal benefits offered by digital payment methods, many people still have certain apprehensions about adopting these methods. The two major reasons why people still refrain from switching to non-cash alternatives of payment are security and privacy risks. Since these digital wallets require a lot of personal information, many consumers feel that their data might not be safe. For instance, in August 2020, Paytm suffered a major data breach, and the attackers, a hacker group called Cyble, demanded ransom in cryptocurrency in exchange for the data, although the senior executives at Paytm denied any such breach. Moreover, there are many cases of fraud and scams in dealing with digital wallets and the government has launched many awareness campaigns to encourage people to be vigilant and not fall into these scammers' traps.

### **Methodology:-**

For the purpose of collecting data for this research, I used the survey questionnaire method. I created an online survey using Google Forms, which had 16 questions in total. The questions were arranged in increasing order of specificity, with questions regarding the respondents' personal information placed at the beginning, while those pertaining to their experience with digital wallets towards the end.

The survey questionnaire method worked best as personal interviews could not be conducted due to social distancing norms imposed to limit the spread of COVID-19. A telephonic interview would have kept the respondents from revealing personal information or answering sensitive questions. Moreover, through the survey, I was able to reach out to a large number of people with diverse backgrounds and organize and assess the required data very conveniently.

All 50 participants selected for this study (sample) belonged to urban areas, namely the cities of Delhi, Mumbai, and Ganganagar. The participants were in the age bracket 18-65, with a majority (54%; 27) being in the age group of 30-45 years, followed by 26% (13) in the 18-30 age group, 16% (8) in the 45-60 age group, and merely 4% (2) being over 60

years of age. Of the total respondents, 50% (25) reported that their highest educational qualification is a Bachelor's Degree while 40% (20) reported having a Master's Degree, and only 10% (5) have a High School Diploma. A large number of participants are engaged in business, while there are also teachers, homemakers, those working in the service sector as well as (college) students.

Although the survey questionnaire method was extremely reliable and convenient, there were certain challenges that I faced over the course of the research. The biggest challenge was to convince potential respondents to fill up the questionnaire. Many people refused to participate in the survey; however, there was no coercion or pressure on them to do so and all those people who did participate did so of their own will. Besides this, I was also not able to obtain detailed information about the participants' responses given restrictions on mobility due to the pandemic. Thus, the accountability of the data obtained is uncertain and can be representative of only a certain section of the middle-class and urban elite in India. Lastly, the resources I had access to, as a high school student, were very limited. Due to time and other constraints, I was unable to get in touch with experts in the field to enhance my findings.

While drafting my questionnaire, I referred to a number of journals and independent research articles. One of them was the Journal of Internet Banking and Commerce (JIBC), an online platform that regularly publishes peer-reviewed research papers and journals related to business and management. Another source was a research paper titled "Do Digital Wallets as a Payment Method Influence Consumers in Their Buying Behavior?" and co-authored by Farah Abrantes-Braga, Giuliana Isabella, and José Afonso Mazzon.

**A blank copy of the questionnaire can be found below:**



podlets  
chillr  
mswipe  
oxigen  
jio  
Ezetap  
Lime

### Impact of Digital Wallets on consumer behaviour in India

This questionnaire has been created for the purpose of understanding the impact of digital wallets on consumer behaviour. All information you provide will remain anonymous and will be used solely for research and analysis.

Ishaansingh3112@gmail.com (not shared) [Switch account](#)

\* Required

Name \*

Your answer

Age \*

- <18
- 18-30
- 30-45
- 45-60
- 60+

Occupation \*

Your answer

Highest educational qualification \*

Choose

What do you use these apps for? Rate on a scale of 1 to 5 in terms of frequency. \*

	1	2	3	4	5
Utility Bills (gas, electricity, insurance, DTH)	<input type="radio"/>				
Peer to peer transactions	<input type="radio"/>				
Mobile Recharge	<input type="radio"/>				
Credit and Investments	<input type="radio"/>				
Payment for online apps (Swiggy, Amazon, Myntra, etc)	<input type="radio"/>				

### Impact of Digital Wallets on consumer behaviour in India

Which of the following apps do you use for mobile payments? You may choose more than one option. \*

PayTm

Google Pay

Phone Pe

MobiKwik

BHIM

Other: \_\_\_\_\_

What advantages have you got from using digital wallets/mobile payment apps?  
You may choose more than one option. \*

- Convenience
- Cashbacks and personalised offers
- Security
- Quicker transactions
- Savings
- Record of spending history
- Other: \_\_\_\_\_

In which year did you start using digital wallets/mobile payment apps? \*

Your answer \_\_\_\_\_

Did you face any challenges when you started using these apps? \*

- Yes
- No

If you chose yes in the previous section, then please specify your reasons.

Your answer \_\_\_\_\_

Do you, currently, face any challenges while using these apps? \*

- Yes
- No

If you chose yes in the previous section, then please specify your reasons.

Your answer

How do you think digital wallets have changed your spending habits? \*

- I spend more than I used to.
- I spend less than I used to.
- I'm not sure.

Do you have any apprehensions about using digital wallets (for e.g., security risks)? If yes, then please specify. \*

Your answer

Do you believe the growing popularity of digital wallets has the potential to transform India into a cashless economy? \*

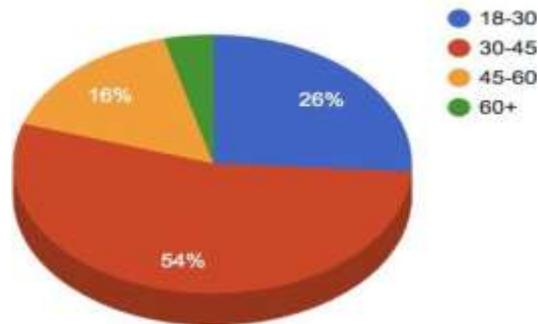
- Yes
- No
- Maybe

The Reserve Bank of India (RBI) set a target to increase the number of digital transactions by about 76% between December 2020 (2,069) and December 2021 (8,707). Keeping in mind the demographics of our country, do you believe this is an achievable target? \*

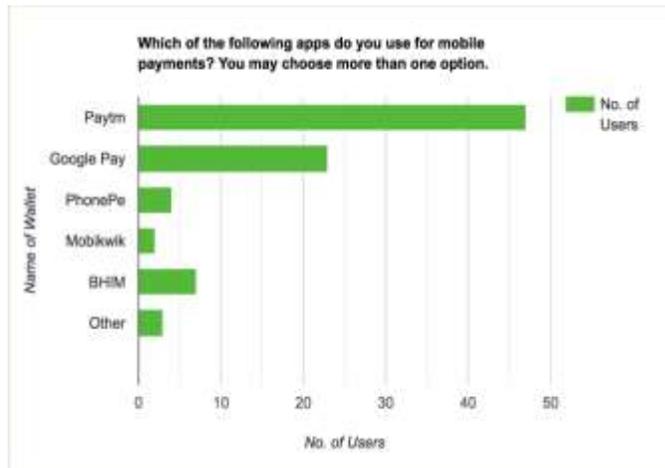
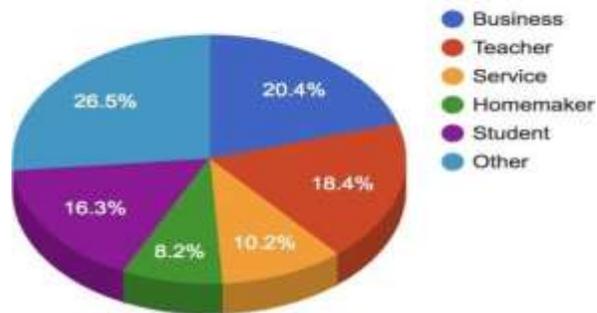
- Yes
- No
- Maybe

Results:-

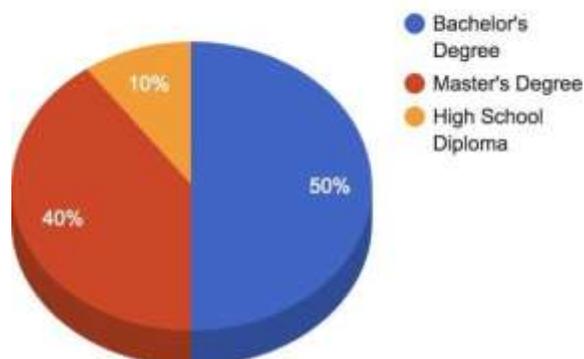
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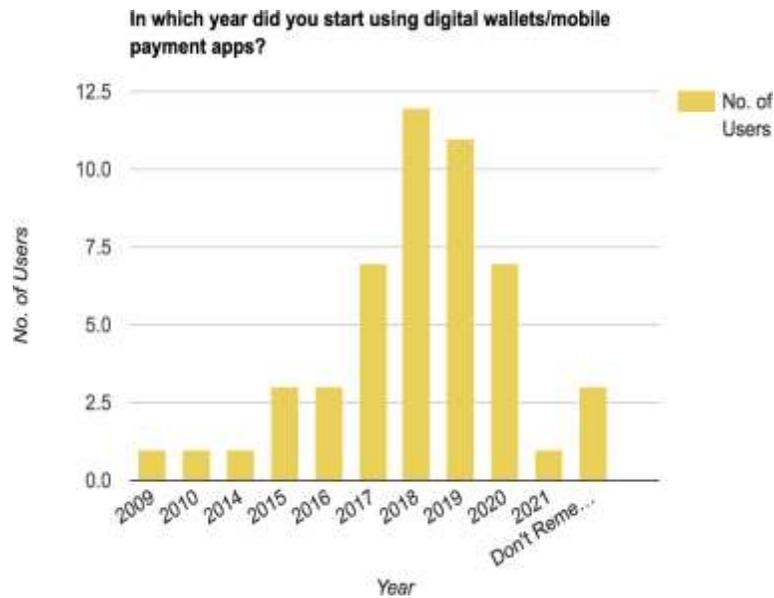
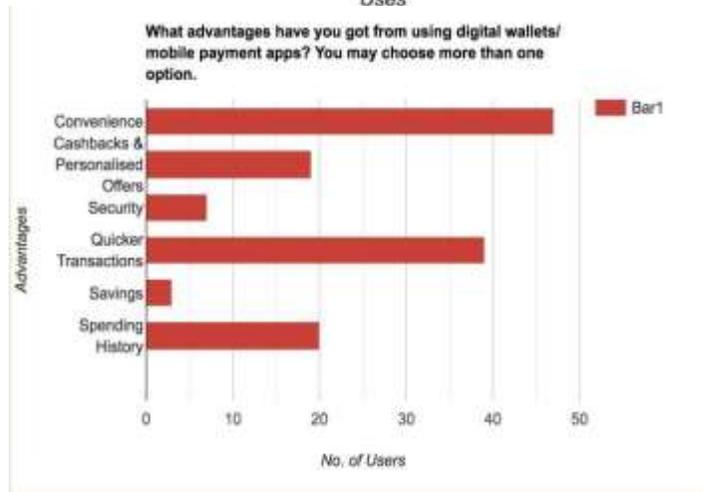
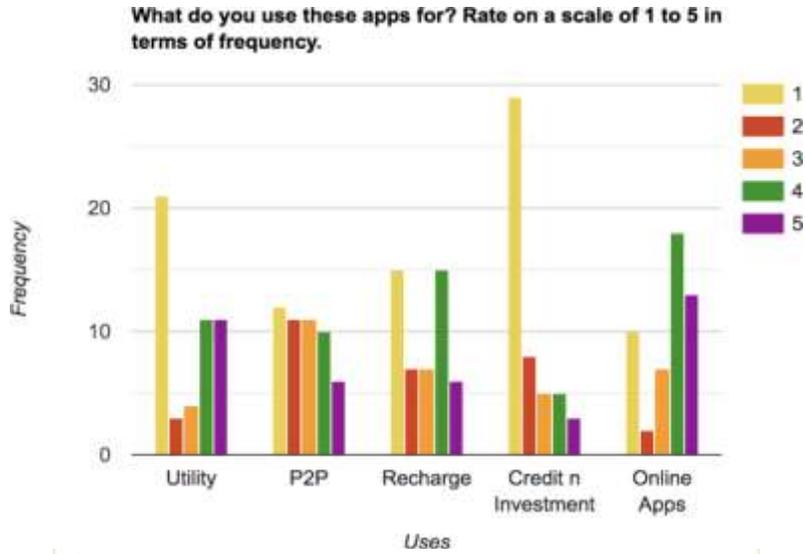


OCCUPATION

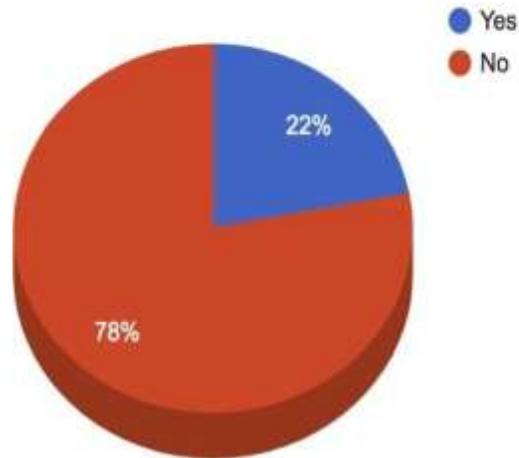


HIGHEST EDUCATIONAL QUALIFICATION





Did you face any challenges when you started using these apps?



If you chose 'yes' in the previous section, then please specify your reasons.

Respondent #1: No

Respondent #2: Delay in settlements

Respondent #3: No

Respondent #4: No

Respondent #5: No

Respondent #6: No

Respondent #7: No

Respondent #8: No

Respondent #9: No

Respondent #10: No

Respondent #11: No

Respondent #12: No

Respondent #13: Using these apps

Respondent #14: No

Respondent #15: No

Respondent #16: No

Respondent #17: Without KYC, I wasn't able to use the wallet

Respondent #18: No

Respondent #19: No so user-friendly

Respondent #20: No

Respondent #21: No

Respondent #22: Not that good technologically

Respondent #23: No

Respondent #24: No

Respondent #25: No

Respondent #26: No

Respondent #27: No so user-friendly

Respondent #28: No

Respondent #29: No

Respondent #30: No

Respondent #31: No

Respondent #32: No

Respondent #33: Sometimes the app doesn't work when there is low connectivity

Respondent #34: No

Respondent #35: No

Respondent #36: No

Respondent #37: No

Respondent #38: No

Respondent #39: No

Respondent #40: No

Respondent #41: No

Respondent #42: Lack of POS (Points of Sale) accepting wallet/digital payments

Respondent #43: Understanding security

Respondent #44: No

Respondent #45: No

Respondent #46: No

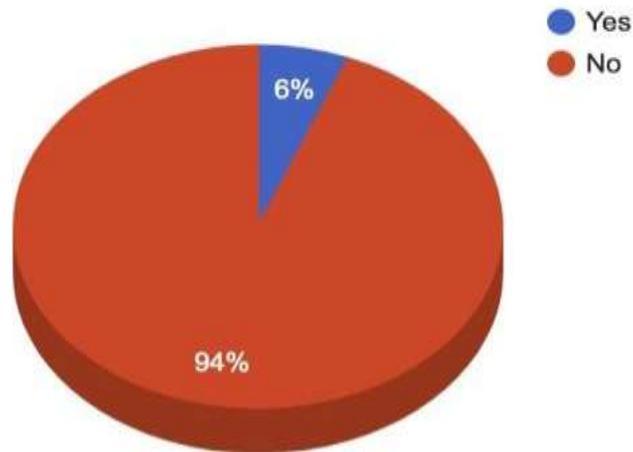
Respondent #47: No

Respondent #48: Sometimes the money got stuck between the payee and payer

Respondent #49: No

Respondent #50: No

**Do you, currently, face any challenges while using these apps?**



Respondent #1: No

Respondent #2: No

Respondent #3: No

Respondent #4: No

Respondent #5: Sometimes the payment fails

Respondent #6: No

Respondent #7: No

Respondent #8: No

Respondent #9: No

Respondent #10: No

Respondent #11: No

Respondent #12: No

Respondent #13: No

Respondent #14: No

Respondent #15: No

Respondent #16: No

Respondent #17: No

Respondent #18: No

Respondent #19: No

Respondent #20: No

Respondent #21: No

Respondent #22: No

Respondent #23: No

Respondent #24: No

Respondent #25: No

Respondent #26: No

Respondent #27: No

Respondent #28: No

Respondent #29: No

Respondent #30: No

Respondent #31: No

Respondent #32: No

Respondent #33: No

Respondent #34: No

Respondent #35: No

Respondent #36: No

Respondent #37: No

Respondent #38: No

Respondent #39: No

Respondent #40: No

Respondent #41: No

Respondent #42: Walkers have started charging extra when topping up (loading) using credit cards

Respondent #43: No

Respondent #44: No

Respondent #45: No

Respondent #46: No

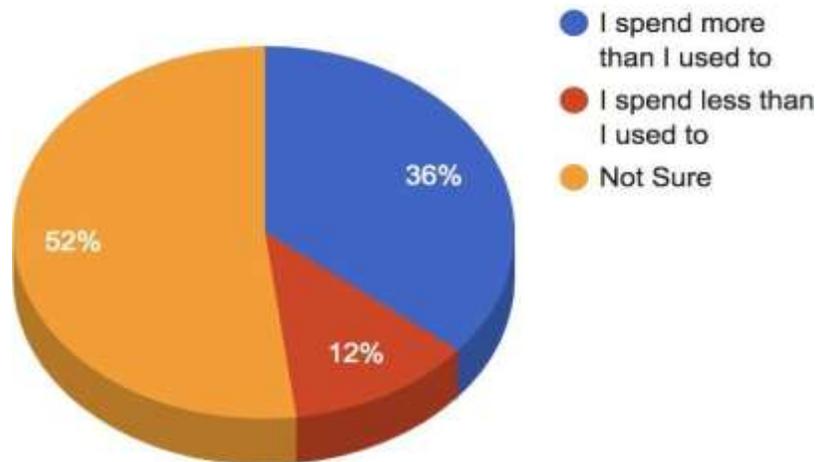
Respondent #47: No

Respondent #48: Sometimes there are network/server problems leading to slow transactions

Respondent #49: No

Respondent #50: No

**How do you think digital wallets have changed your spending habits?**



Respondent #1: Cyber frauds

Respondent #2: Data leak

Respondent #3: Security risks

Respondent #4: No

Respondent #5: Security risks

Respondent #6: Security risks

Respondent #7: Risk of phone getting hacked

Respondent #8: Frauds/Scammers

Respondent #9: Security risks

Respondent #10: No

Respondent #11: No

Respondent #12: No

Respondent #13: Security risks

Respondent #14: No

Respondent #15: No

Respondent #16: No

Respondent #17: Security risks

Respondent #18: Security risks and data theft

Respondent #19: No

Respondent #20: Cyber frauds

Respondent #21: No

Respondent #22: Security risks

Respondent #23: No

Respondent #24: Security risks

Respondent #25: No

Respondent #26: Scams

Respondent #27: Scams

Respondent #28: No

Respondent #29: No

Respondent #30: Security risks

Respondent #31: No

Respondent #32: No

Respondent #33: No

Respondent #34: Security risks

Respondent #35: No

Respondent #36: Security risks

Respondent #37: No

Respondent #38: No

Respondent #39: No

Respondent #40: No

Respondent #41: No

Respondent #42: No

Respondent #43: Security risks

Respondent #44: Security risks

Respondent #45: No

Respondent #46: Data theft/scams

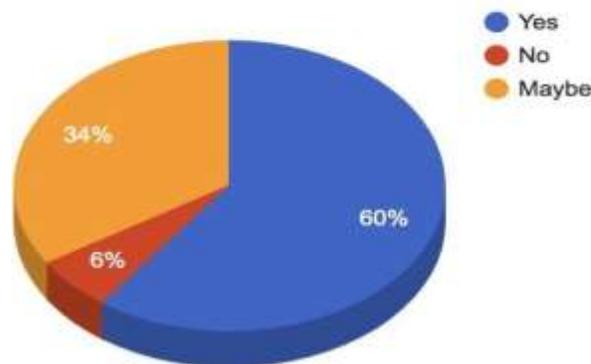
Respondent #47: No

Respondent #48: Security risks

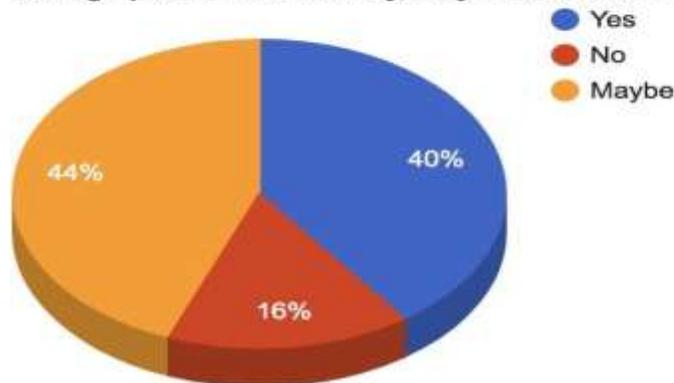
Respondent #48: No

Respondent #49: No

**Do you believe the growing popularity of digital wallets has the potential to transform India into a cashless economy?**



**The RBI set a target to increase the number of digital transactions by about 76% between December 2020 (2,069) and December 2021 (8,707). Keeping in mind the demographics of our country, do you believe this is an ac...**



**Discussion:-**

The results revealed that Paytm was the most popular choice among the respondents as 47 (amounting to 94%) respondents use Paytm followed by Google Pay which was one of the preferred payment apps for 23 (46%) respondents. Paytm was way ahead of its rivals even before Demonetization revolutionized the digital payment industry in India. Since then, both its user base and value have grown exponentially. The company was last valued at \$16 billion with over 350 million active users. The main reason for Paytm’s popularity is the relative ease and convenience of use. A bank account is not a prerequisite to sign up for Paytm and thus “PayTM was/is able to sign up hundreds of thousands of merchants that don’t have bank accounts” (Swaminathan). Only 7 (14%) respondents use BHIM, a government undertaking to encourage cashless transactions while PhonePe and Mobikwik had 4 (8%) and 2 (4%) users respectively.

These apps can be used for a variety of purposes, such as paying utility (water, electricity, etc.) bills, making payments for online apps (Swiggy, Zomato, Amazon, etc.), and recharging mobiles and other devices, to name a few. The respondents were asked to rate on a scale of 1 to 5 what they use these apps for. "Payment for online apps" was the most popular choice among respondents as 13 respondents claimed that they use digital payment apps most frequently (5) for the purpose. As discussed above, these apps have a one-tap payment system that eases the payment process and improves the overall consumer experience. The results also depicted that people (29 respondents) rarely use online payment apps to make investments and avail credit, with 29 participants. However, apps like Paytm are launching platforms like Paytm Money that allows its users to invest in mutual funds and stocks. 11 participants also reported that they use the apps very frequently to pay utility bills, further attesting to the apps' user-friendly and convenient nature.

As for the benefits accrued from the usage of mobile payment apps, 'convenience' was found to be on the top, with 47 (94%) respondents reporting it as one of the major advantages. As highlighted before, convenience and the relative ease of use of digital payment apps were the central factors that contributed significantly to the shift to cashless transactions in India. Related to convenience is another factor, i.e. 'quicker transactions' which followed 'convenience' as the second most common (39 respondents; 78%) advantage that consumers got. 20 (40%) respondents claimed that the ability of these apps to maintain a record of their spending history was a major advantage and 19 (38%) of the respondents highlighted 'cashbacks and personalized offers' as a key benefit. Many mobile payment apps have specialized sections for discounts and offers that registered users can avail of at various stores. Other benefits include security (7 respondents/14%) and savings (3 respondents/6%).

A majority of participants (12) claimed that they started using digital payment apps in 2018 while 11 of them started using them in 2018. This shows that there was an upsurge in the number of users of mobile payment apps in the post-2016/Demonetization period. This highlights the instrumental role played by the policy in bringing about a long-awaited revolution in the industry. Only 3 of the 50 participants began using these apps in 2016 and the number remained the same for respondents who shifted to digital means of transactions in 2015. 3 participants in total reported using these apps between 2009-2014 and some of them did not remember the year in which they started.

As for the question of whether the participants faced any challenges when they started using these apps, 39 of them chose 'No' and the remaining 11 reported facing several problems when they used these apps for the first time. These include delays in settlements, a lack of points of sale (POS) that accepted digital payments, a non-user-friendly interface, and the inability to make digital payments in areas with low connectivity. Indeed, users had to face many challenges in the initial days of India's transition to a digital economy; however, it was all worth it.

A majority (47) of respondents claimed that they do not face any challenges in using these apps currently. However, the remaining 3 respondents claimed that they continue to face several challenges that are a cause of inconvenience for them. These challenges include failure to complete transactions, extra charges levied by walkers when topping up using credit cards, and an inability to make fast transactions in areas with low internet connectivity. These challenges may hinder the users from having an ideal consumer experience.

18 (36%) respondents claimed that using digital wallets has made them spend more than they normally would. Finance experts and behavioral economists believe that this phenomenon of spending more when paying with alternatives to money is not new. With digital wallets, the pain of payment - "... an immediate pain that consumers often experience upon paying that can undermine the amount of pleasure they derive from consumption" (George) - is significantly less as it is experienced after a set period of time. Due to the payment experience being much less painful, people may develop the tendency to spend more than they usually would. While only 6 (12%) respondents claimed to spend less than they used to, 26 (52%) of them were not sure about the impact of mobile payment apps on their spending habits.

Despite the increasing popularity of mobile payment apps, many consumers still have apprehensions about this new means of payment. The most common risk involved is that of security as, over the last few years, instances of data theft, scams, and cyber frauds have increased. Thus, people must be cautious while using these apps to ensure a secure and comfortable user experience.

30 (60%) respondents believe that the growing popularity of digital wallets has the potential to transform India into a cashless economy. The government has, as highlighted above, taken many initiatives to improve financial inclusion and ensure that rural and backward areas also enjoy the benefits of using digital wallets, furthering the country's transition to a cashless economy. Only 3 (6%) respondents are of the view that the popularity of digital payments cannot transition India into a cashless economy, while the remaining 17 (34%) respondents are not sure about it.

As for the question of whether RBI's goal of increasing the number of digital transactions by 76% between December 2020 and 2021 is achievable, 20 (40%) respondents feel that it is. However, 8 (16%) respondents claimed it isn't and 22 (44%) respondents are not sure about it. The government must take more steps to bridge the gap between the rural and urban areas in order to improve India's financial inclusion.

### Conclusion:-

The inclusion of digital alternatives of money has had an overall positive impact on the Indian economy as well as the behaviour of the average Indian consumer. The results of this study revealed people have begun showing an increased preference for digital payment apps, furthering India's transition to a digital economy. As the world becomes progressively tech-driven, it is imperative for India to strengthen its digital base in the financial sector. The increasing popularity of these mediums has also led to greater desire among Indian entrepreneurs to launch startups and invest in mobile payment apps due to an even greater return of investment. Paytm is the most popular example of a startup that rose to success due to governmental assistance and enthusiastic investment by its stakeholders. The benefits of the rising influence of mobile payment apps may also be accrued to small entrepreneurs as the government is making efforts to improve financial inclusion. Thus, digital payment apps may prove to be the pathbreaker India may be looking for to boost its economy and make it reach greater heights.

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