

REVIEW OF LITERATURE ON ADOPTION OF DIGITAL PAYMENTS IN PANDEMIC (COVID-19)

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ABSTRACT

Pandemic Covid-19 is indirectly helping to fulfill the Centre's vision of Digital India program as many service providers like banks and telecom sector operators have significantly reduced their offline activities and they are asking their customers to hold the digital method for any assistance. This situation and the steps taken by various service providers can help to speed up the digital transformation throughout the different countries. This can positively impact on adoption of digital payments globally. Otherwise, negative impacts are seen in the core sectors of the Indian economy in terms of railways, airlines, transport, tourism and hospitality etc.

Purpose: *The purpose of the study is to review the existing literature on digital payments adopted during the pandemic covid-19. The study efforts to access the growth made in terms of adoption of Digital Payments.*

Research Design & Methodology: *A systematic review the literature was used to search the interviews/tweets/talks/blogs/research papers on Digital payments with special reference to pandemic covid-19.*

Data analysis by NVIVO- *Word cloud, tree map and sentimental analysis are used to analyze the reviews by sentimental analysis.*

Research limitation: *The study is only based on a particular situation with time limits (Covid-19).*

Conclusion: *This study brings various attention-grabbing insights about the readiness to adopt change regarding digital payment options of the users under pandemic covid-19.*

Keywords: *Digital Payments, Covid-19, Digital shift, E-commerce & covid-19*

1. INTRODUCTION

Digitization of payments in India has seen a rapid growth in the last few years. Covid-19 plays an important role to achieve the digital India's intentions fulfilled. Due to pandemic people avoid personal interactions and giving online payments the major boost. There has been a change from old-style use of wallets and physical cards to the acceptance of digital modes of payment like banking card (Debit or credit cards), NEFT, RTGS, Mobile apps etc. That helps to make every economy digitalized. RBI Governor Shaktikanta Das also request to Indians to exercise the digital payment infrastructure of the country to reduce the personal interaction in Pandemic. He said that Banks should guide accordingly to promote Digital Payments in country by using of NEFT, UPI and IMPS. It is a way to minimize social interaction to carry out dealings without physical contact.

2. REVIEW OF LITERATURE

2.1 Digital shift in the behavior of consumers after covid-19

Jaganmohan(2020) according to the results of the survey among the Indians, it is found that a majority of respondent has no change in their use of digital payments in COVID-19 situation. However, 33% of the respondents said that, used digital payments more than before and while 9% made online payments exclusively.

According to **Capgemini Research Institute (2020)** as per a recent report, 80% of Indian consumers between the 56 to 60 years age group revealed the highest usage of digital payment during the pandemic COVID-19. This was followed by the 36 to 45 years the age group at 83% with maximum usage. The report also says that the usage of digital payments among Indian consumers are in the present scenario positions highest at 75% where, China with 63% and Italy followed by 49%. The global average is 45%.

According to **Twum (2020)** the pandemic is driving major changes in consumer behavior that are likely to continue long after COVID-19 pandemic. Digital transactions are growing as many business houses are seeking continuity during the lockdown and increase their presence digitally and boost sales through digital channels. In COVID-19, South Africa noted a 35 to 40% increase in online transactions as well as an increase in the number of retailers requesting for online payment systems to administer the increased demand from customers.

Aggarwal (2020) COVID-19 had a significant impact on consumer behavior and leading to a sharp growth in the adoption of e-commerce and digital payment methods in pandemic. The shift identified in consumer behavior towards online transactions varies across all the sectors. According to the study, COVID-19 makes a positive impact on digital payments but it is expected to be marginally lower than the growth in E-commerce due to the attractiveness of cash on delivery (CoD).

Kanungo & Pati (2020) this study says that, Rural and urban area's customers have shown their interest towards choosing digital payment systems every day in life. The study concludes on the note that there has been penetration of digital payment system in rural areas also. These digital transactions are redefining and giving a new path to the rural India to develop and has not limited its boundaries only to the urban areas. In case of urban consumers, they are more satisfied with digital transactions. On the other hand, the rural customers have not only started adopting digital payment methods, but they are not satisfied with its application in their routine activities.

Sharma (2020) (*CEO-Get Simple Technologies Pvt Ltd*) said that, individuals who are never ever do any online transactions or never bought online groceries are now going for online transactions. This situation (Covid-19) is cheering people for online transactions. This situation never ever happened in last five years that occurred in the past three months.

Kharif (2020) Consumers are now shopping more online by mobile apps and relying more on digital payment methods even for person to person transactions to avoid personal contact with cash or debit/credit card readers.

Zelle (2020) Many customers have been adopted mobile payment apps to transaction. A real-time mobile person-to-person (P2P) payment service provider has seen considerable increases in both enrollment and usage of apps in Covid-19.

According to **Nasscom Insights (2020)** rural part of India has mainly increased the usage of some digital modes of payment during the Covid-19. Mobile vans comprising mini ATMs and bill payment kiosks have specifically picked up in the rural areas of India. Similarly, AePS (Aadhar enables payment service) has also seen a growth in its usage during the current pandemic. On the opposite side 94% of Indian consumers have adopted digital retail payment in the Metro cities. The metropolitan areas had witness a enormous spike in the use of various digital payment methods, especially digital wallets, cards, payment apps and internet banking in the wake up of Corona virus.

Thomson, (2020) COVID-19 has given an insight, how businesses and individuals can manage their financial dealings in a different way. In itself, it's not brought new ideas to the fore, but it has accelerated the adoption of ideas which were already in place if little used by them, pre-COVID-19.

Hicks (2020) believes this can only be positive for consumers. The digitization and personalization of the application process and the free flow of related data from customer to bank can lead to far better customer service/relationship management.

Asbe (2020) the offline-to-online switch in payments has been long in coming, however there has been an accelerated shift in consumer behavior in the recent lockdown scenario due to covid-19. NPCI has been urging and reaching out to consumers and all services providers of essentials services to switch to digital payment methods to stay protected. We are seeing growth in essential categories, online donations and entertainment on the OTT medium. There has been a dip in volumes as discretionary spends and some of the segments like travel, hospitality are near to zero.

Virus has quickened the speed of digital-payments adoption even in small cities and there is a enormous demand from merchants for contactless payment solutions. Contrary the days of demonetization, when structured retail got a bigger boost from digital transactions now small grocery shops are going to benefit. **Singh (2020)**

Edwards (2020) said that, social distancing doesn't have to prevent the flow of money in today's digital world. Whether we are talking about spending funds or receiving funds from a disbursement, we will likely see the growth in digital payment adoption. Consumers and small businesses will have a bigger opportunity to pay virtually without any physical interaction or visiting the bank or handle cash or paper checks. Moreover, immediate payment adoption may maintain to grow with more just-in-time consumers needing faster access to funds to pay their bills and other expenses.

As the number of cases tick up in the U.S., some are going cashless to avoid potential hygiene issues around handling banknotes. Regardless of whether there's a proven risk, the "psychological factor" of people thinking of cash as "unclean" could change how they choose to pay, according to Bain & Co. partner. **Olsen (2020)**

Still (2020) said it's too soon to tell if the virus will be enough of a jolt to change the payment system in the long-run. The effect could go beyond payments. They said Zoom and other software companies that people are newly relying upon for at-home-work could also see similar trend to what happened with payments in India.

Kania (2020) Digital sales are no longer just about expansion or innovation, they are part of a business continuity plan. Even goods and services that were once the exclusive domain of brick and mortar, like health and fitness services, are going digital with online reservations and classes and digital payment systems. Since the pandemic started, record numbers of people have been engaging in digital commerce for the first time. According to recent Forrester data, in Italy, 14% of consumers have signed up for video streaming for the first time; in China, 24% tried ordering their groceries; in the US. 12% of consumers started taking online exercise classes for the first time.

Redseer (2020) Indian Fintech is poised for strong sustainable growth. While some Fintech subsectors are on facing temporary downturn amidst COVID, others have actually taken a boost driven by the Indian customer increasingly going digital amidst COVID. Sectors such as Digital Payments, Insurtech and Wealth tech actually came in a sweet spot amidst COVID, while MSME digital lending is going through significant downturn driven by MSME sector significantly impacted currently due to COVID.

Braunstein (2020) The covid-19 pandemic could move the world more rapidly towards digital payments. It is too early to conclude what the changes might look like in each cultural, demographic, and institutional context, but we can be sure that covid-19 is already reinforcing existing trends towards increased digitization of payments. here's no doubt that covid-19 will accelerate the pre-existing trend towards digital payments in Asia, and China in particular. In China, where digital payments are already prevalent, covid-19 could be a significant driver for the total elimination of cash. The Chinese government actively promotes its internet banking infrastructure, whereas Western nations rarely use a top-down approach to governance.

2.2 Usage of E-Commerce websites and online Payments apps in COVID-19 Pandemic

Jain & Kothari(2020) During the COVID-19, an increase in orders placed on E-commerce websites and online apps. Someone who performs any such services on ecommerce platforms can pay through the payment gateway. It ensures the security concern of customers for making the digital payment option safer and safer. The customer can choose to pay using their cards mobile app for make payments digitally.

Patel (2020) According to the analyses, the digital payment acceptance rate is dropping in 2019. In addition, it was a major change in every country. COVID-19 disease has increased the adoption of digital payments. The outbreak has enforced consumers to change their buying habits or behavior to interact with E-Commerce and M-commerce. This has blocked the way for digital payments. An increasing number of Smartphone users will force the development of digital payments in the future. While most of the competitors will come with more competitive digital payment platforms, customers will undoubtedly have an improved experience with digital payments.

Schulman (2020) says that, Prior to the Covid-19 pandemic, our country already on a long-term pathway to a frequently cashless society but the events of the last several months have expedited the timeline extensively. This is a critical inflection point for large consumer adoption of digital

payments. The corona virus pandemic will permanently change consumer behavior in favor of digitalization in India.

Chaturvedi (2020) “An online presence will help SMBs connect with customers and attract business. COVID-19 has changed how SMBs look at payments. Earlier, merchants were content with using traditional ways of accepting payments. But after the pandemic, there is a surge in interest from offline merchants for digital solutions

Patel (2020) March to May traditionally attract the maximum travel-related expenses by Indian consumers. This could change this year if the situation persists. March and April see customer demand for traveling. Corona-virus posts a cloud on prospect transactions through the sector which brings nearly 30% of the payments for the online payments industry.

Paytm spokesperson said that, they have been witnessing 20% growth in digital payments as compared to the usual days. There has been a massive surge in repeat transactions for various use-cases like utility payments among each one. Offline payments have grown by 12% owing to more people using Paytm over cash payment.

Mathur (2020) Covid-19 is forcing sectors to digitalize because businesses cannot be closed for long term and social distancing is important at least for the next 12 months.

Raghupathy (2020) said that, our new user acquisition has grown-up by 50% as digital payments have been adopted by people across all the segments for multiple usage.

Stanley (2020) said that Covid-19 has relieved certain worry relating to digital transactions. They believe Covid-19 could speed up the shift to online transactions (e-commerce and payments) and gives a boost to progress in India's digital economy. The Covid-19 outbreak has the potential to accelerate digital adoption specified in his research. This research conducted with a survey among 1,540 active Internet users across the top 50 tier-I and tier-II cities in India. It found a massive jump in Internet usage with over 40% of the surveyed population saying they spent more than two hours a day on the Internet usage in the lockdown period.

Rai (2020) said that, the growth is well known on e-commerce during Unlock than before pre-pandemic and during the first stage of lockdown. Here is the chance for conversion of Cash on Delivery (COD) to Digital on Delivery. COD was an animal we were trying to domesticate and it seems like that its day has finally come.

Shiliashki(2020) the set of lockdowns during this pandemic have been terrible for everyone. What we have seen is that everyone has flocked to e-commerce. What would have taken decades to complete in terms of move to e-commerce, move to online, adoption of digital payments, has now been compressed in a few months.”

2.3 Government support for digital transactions in COVID-19 Pandemic

According to Nilekani(2020) India's digital payments could grow tenfold within the coming three years if the Reserve Bank of India-appointed panel's suggestions are implemented by RBI. She said that Today is about 22 transactions per capita which can go to 220 per capita. They identified number of things on how to make acceptance network everywhere and how to make dispute development more online. They have to come with lot of recommendation and if put all these together they can make a huge difference.

Bhandari (2020) Online services delivered by encouraging customers to make payments through digital payment systems such as a credit/debit card or mobile payments apps with mandates by the government in numerous parts of India.

Agur et.al (2020) Digital financial services can affordably and handily connect entrepreneurs with banks, suppliers, employees, and new markets. They can help peer-to-peer transactions including the remittances. They can allow governments to attain households and firms in a suitable manner. All of these take on added value during the reaction to the COVID-19 crisis, as governments seek ways to invest in those in need more quickly and effectively. Many households and firms are aimed to rapidly access online payments and financing. Digital financial services help to maintain the social distancing during the pandemic. More generally, digital financial services can encourage financial

inclusion in rural and poor areas where the physical existence of financial institutions is totally missing.

According to Chakraborty (2020) said that banks, government, regulators and service providers encouraged consumers to adopt the digital payments to control the covid-19. We are seeing are the symbols of further growth of digital payments among a huge population in India. While demonetization hard-pressed India’s need to move to digital covid-19 will speed up the shift into a less-cash economy in the long term. As digitalization becomes the new normal and organizers of digital platforms, providers and retailers will need to work collectively and invest in infrastructure to carry the digital drive. There should be boost to infrastructure by investing in new payment platforms or methods and cloud-based infrastructure to increase the flexibility, security, scalability and market rapidity is essential.

3. DATA ANALYSIS

The data analysis was performed using data analysis software, NVivo. NVivo is a computer aided qualitative data analysis software program that enables a researcher to search, count or index specific or similar words across multiple text documents. The data analysis was performed in three stages. The first stage involved text mining to identify the frequently used word in reviews by word cloud. The second stage involved tree map of representing word search query. In the last stage sentiment analysis was performed by using NVivo to identify consumer’s positive and negative responses to the attributes. Sentiment analysis is a type of text mining that measures people’s ‘sentiments’ on whether they are positive or negative toward a particular topic through extracting and analyzing people’s subjective information.

3.1 Word cloud- ‘Word Cloud’ is a map that displays up to 100 words in varying font sizes. It shows that the larger the word, the greater the usage of that word in the articles. It is a quick summary of selected nodes. It lists the factors covered on the selected nodes. Word cloud is also an attractive representation tool.



Figure 1. Word cloud of frequently used words

NVivo word cloud analysis of 34 reviews (Research papers/Interviews) citing reviews on adoption of digital payments under Covid-19 and published in year 2020. According to figure 1 Majority of the reviews dedicated maximum content to digital payments, COVID, transactions and pandemic etc.

3.2 Tree map- Tree Map’ is another mode of representing word search query. It is more practical in cases where a specific set of words are inquired in selected items. The below figure 2 displays the tree map of reviews done by the researcher on adoption of digital payments under covid-19.

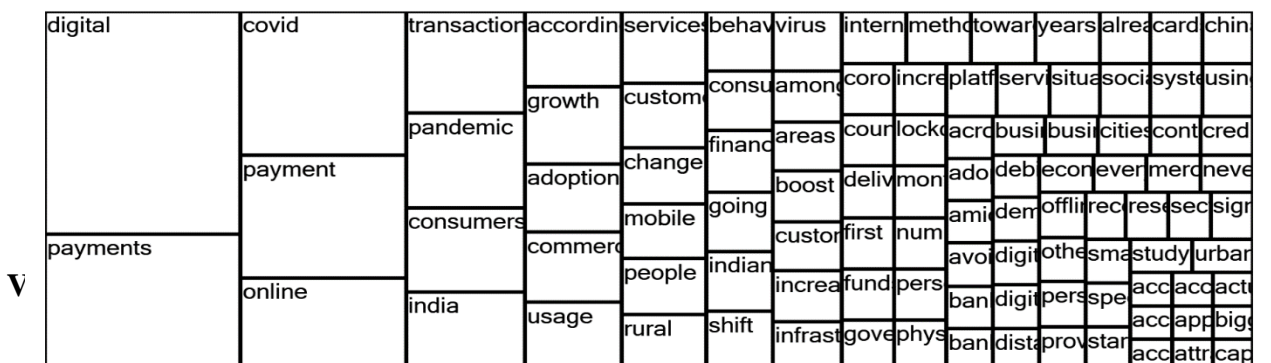


Figure 2. Tree map

3.3 Sentimental analysis results:

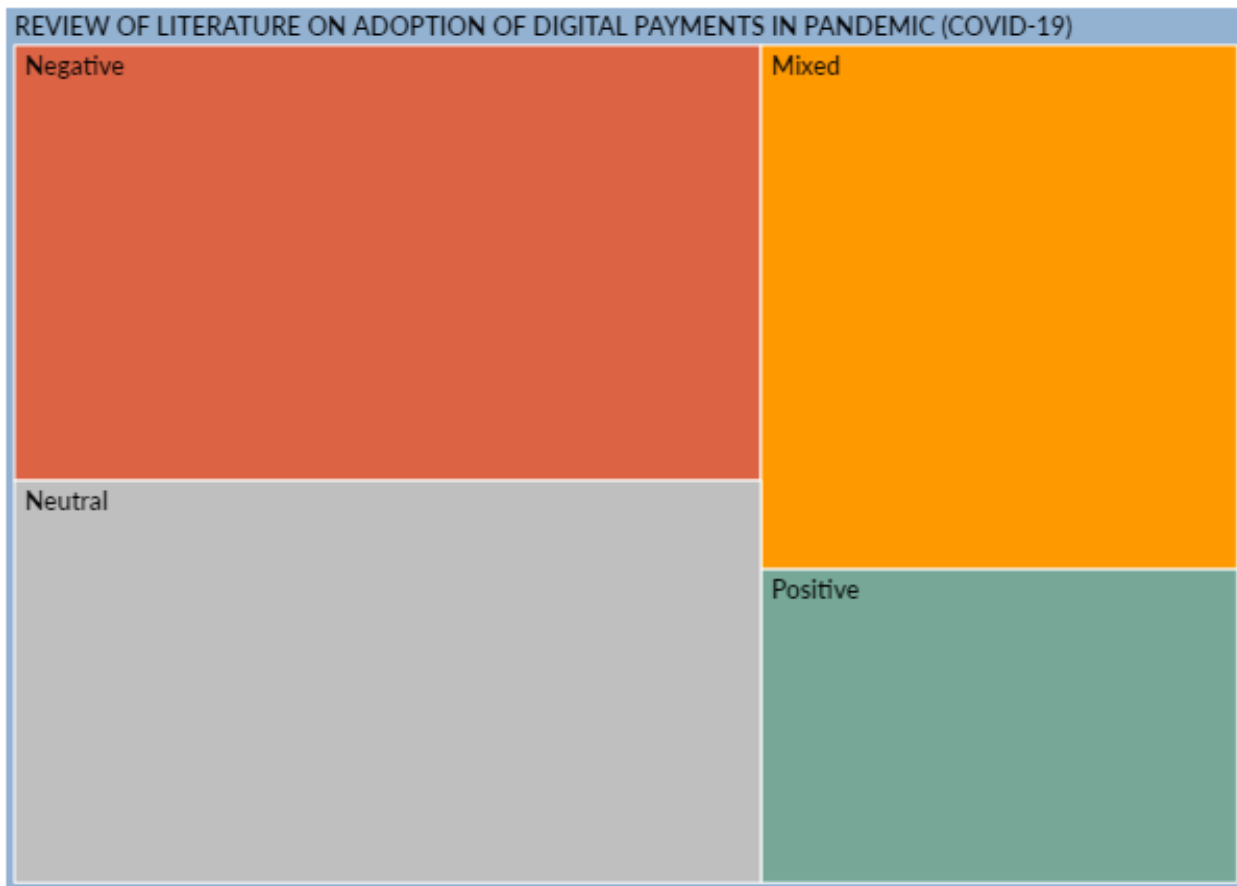


Figure 3. Hierarchy chart (Compared by number of sentiment coding reference)

Above figure 3 shows the results chart of sentiment analysis, where orange depicts the negative comments, yellow indicates mixed comments, grey indicates neutral comments and green indicates positive comments.

Sentimental analysis results revealed that most of the peoples talks negative or neutral about the digital payments where some shows mixed views and less have a positive view towards the adoption of digital payments.

Table 1. Coding matrix

Very negative	Moderately negative	Moderately positive	Very positive
6	20	14	5

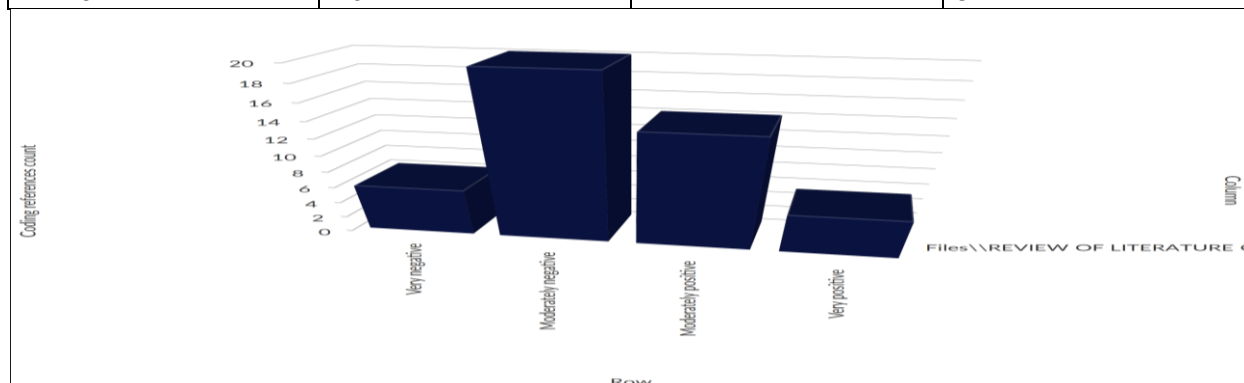


Figure 4. Auto code sentiment results

4. CONCLUSION

Based on studies, it has been concluded that the adoption of online or digital payments during Covid-19 is impacting consumer behavior in many aspects. Earlier studies have also found that every

region, whether rural or urban, is now ready to adopt digital payments. In all countries, Covid-19 is now playing a motivating role for digitization. Also found that the all have emphasized on digital transactions. Mostly talks about the changing scenario being digitalized. They point out that the behavior of consumers has now completely changed in favor of digitization after the covid-19; they are ready to adopt digital payments. Government and RBI play a vital role in this pandemic by supporting and encouraging peoples to adopt digital transaction in daily payments.

Finally, this pattern of digital payments should be long term so that it helps in economic development.

5. LIMITATIONS

This study is limited to reviews from a single phase (Covid-19) which limits the data set. With more advanced software available today, a large data analysis can be carried out with reviews from numerous sources which may be able to produce deeper and more specific insights on digital payments.

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