

## IMPACT OF COVID 19 ON THE PAYMENT PATTERN OF INDIAN CONSUMERS

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### ABSTRACT

*The Corona Virus Disease – 2019 (COVID-19) presented a threat to many societal dimensions of life. The disease, which was declared a global pandemic, affected not only our health but also the economic well-being, societal stability, and even the democracy of some societies. India is one of the countries that was significantly affected by the pandemic. The lockdown and social distancing measures to control the disease led to significant disruptions in how the day-to-day business transactions in the country are done. This research study aimed to investigate the impact of Covid-19 on the payment pattern of Indian consumers. The alternate hypothesis formulated for the study is H1: There is a significant change in the payment pattern of Indian consumers due to Covid-19. The researcher used a quantitative research design. Secondary data was obtained from the RBI and analyzed using the paired sample t-test. Results from the data analysis showed that the p-value was less than 0.05 ( $p < 0.05$ ), and therefore, the alternate hypothesis formulated for this study was accepted. The researcher concludes that Covid-19 had a significant impact on the payment patterns of Indian consumers.*

**Research Implications:** *This study undertaken will draw the attention of the Academicians, Policy Makers, Bankers and Research Scholars. It will further highlight the role of Digital Payments during lockdown period.*

**KEYWORDS:** *Covid-19, AEPS, M-Payment, APBS, RTGS, IMPS, PPI Non-traditional Payment Methods.*

### Introduction

The Corona Virus Disease – 2019 (COVID-19) presented a threat to many societal dimensions of life. The disease, which was declared a global pandemic, affected not only our health but also the economic well-being, societal stability, and even the democracy of some societies. However, it is notable that it is not the pandemic alone that has a significant negative influence on our societies. For a long time, there have been anti-human, xenophobia, greed, racism, regional imbalance, a lack of democracy, among many other vices in society that have brought it to its knees. The Coronavirus pandemic became the equalizer, and its conflict with these issues showed that the disease could only be overcome by humanity, science, unity, trust, and equal treatment for all in an effort to support the health institutions that aid in fighting the disease and financial institutions that come to the economic relief of societies. The disease brought fear and anxiety to societies; however, it is evident that for the human race to overcome, compassion, solidarity, and everybody's responsibility within their scope is vital. People need to continue with the day-to-day narrative of helping each other. Those in authority take the necessary decisive actions. Those working in the healthcare sector should continue their bravery in the sacrifice of saving those who have been victims of the virus.

India is one of those countries that were significantly affected by the virus. The country was put under a lockdown, and the burning question in the minds of its citizens was whether it shall be extended. As it is, when a pandemic spreads, the worries and uncertainties associated with it also spread. Most people in various societies sought means and ways to protect themselves from contracting the disease and life-hacks on how to survive amidst the pandemic. People searched for masks everywhere, and there was an increase in the search in social distancing (Bhatia & Dantewadia, 2020).

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Over the years, infectious diseases such as Ebola, SARS, and now Covid-19 have become more difficult and more difficult to contain. The global numbers of those infected and those dying from the disease are increasing day in day out. The disease continues to spread across the world (Fernandes, 2020). At the time of writing this research paper, almost 98.9 million were affected worldwide, with cases of death reaching 21,22,872. While in India, at the time of writing this paper, the number of affected cases reached 1,06,54,533, and cases of death reported is 1,53,339.

Epidemics have a negative effect on economies besides the direct medical costs and the introduction of various disease control measures. Lockdowns, which directly lead to the restriction of the transport of goods and people, especially in areas worst hit by the pandemic, have a dramatic disruption in the production of goods and export. Consequently, potential development in these areas is hampered because investors no longer have trust in the markets. Apart from these effects on the production and flow of goods, consumers' spending, and pay for the available products changes. Particularly, consumer behavior changes because of reduced travel and presence in public places. This is one of the measures taken to control the spread of the virus and minimize the risk of infection. These disturbances lead generally affect economies in one way or another.

Macro-economic factors affect economies through the disruption of goods and services (Hamilton, 2009). Therefore, it is important to understand the effects of pandemics and epidemics on the behavior of consumers. This understanding will help policymakers and practitioners in economics formulate ways to counteract disruptions in economies.

The attention given to consumer characteristics and their behavior in the buying and selling of goods has become limited in the majority of the studies. This shift is largely contributed by a lack of micro data that helps in the measurement of the effects of epidemics and pandemics in academics. Detailed studies rely heavily on aggregated expenditure statistics, which are computed on small periods such as monthly or quarterly. Also, these statistics are often revised based on the nature of the markets. Because of this limit in the availability of detailed and large data, it has not been possible to evaluate epidemics' consequences to the economy. Besides, consumer behaviors are not well known, and therefore it has not been possible to determine the underlying factors of these behaviors (Ramya & Mohamed, 2017).

The objective of this research paper is to determine the impact of Covid on the payment pattern of Indian consumers. This topic is based on a study of the impacts of Covid on consumer behavior. The paper explores how the Covid-19 pandemic has affected the consumption and shopping behaviors of Indian consumers, consequently their payment patterns. In particular, it is evident that customers have minimized their spending on regular shopping centers and stores. However, they have shown a significant shift in spending on e-commerce. This has resulted in a change in the way consumers pay for their goods and services. This change is also due to the way people reacted to the Covid-19 pandemic – the psychological element of fear of contracting the disease if they chose to pay via conventional means.

This research paper is based on the challenges brought by the Covid-19 pandemic and therefore sets out to show the shift in payment patterns of Indian consumers. The shift in payment patterns is attributed to authorities' policies and strategies as a way of slowing down the spread of the virus and supports the economy. In order to achieve these objectives, there was seen a massive growth and acceptance of electronic commerce as an option to conventional shopping.

The following is the hypothesis formulated in an effort to achieve the research's objective:

- H<sub>01</sub>:** There is No Significant change in the Volume Payment Pattern of Indian consumers due to Covid-19.
- H<sub>02</sub>:** There is No Significant change in the Value Payment Pattern of Indian consumers due to Covid-19.

## Literature Review

### Origin of COVID-19

The first human cases of COVID-19 were reported by the World Health Organization (WHO) in Wuhan City, China, in December 2019 (WHO, 2019). The Chinese government had taken retrospective inquiries and gave reports of human symptoms at the start of December 2019. There was no exact known cause of the disease. However, some of the earliest cases were suspected of originating from a wholesale food market in the city, while others did not. The majority of the first known cases were store owners, market staff, or those who regularly visited the market to do their

shopping. Biological samples were obtained from the market and tested for SARS-CoV-2 in laboratories; the results were positive. It was then concluded that the virus originated from a market in Wuhan City of China. Consequently, this market ceased operation on 1st January 2020. The SARS-CoV-2 identified in early January 2020 was announced, and its genetic mechanism was put on the public domain on the 11th and 12th of January 2020.

The gene results of samples from different people showed some similarities. These findings showed that the virus originated from a single case that was introduced into the human population. Research studies to understand where the pandemic started in China are underway. Some of the studies are investigating the symptoms associated with the virus, others include environmental sampling from the market where the cases were first reported, and others are researching the types of animal flesh that was sold in the Wuhan market (Adhikari et al., 2020; Mackenzie & Smith, 2020; Ge et al., 2020). Findings from these studies are vital to understanding how similar pandemics can be prevented from entering the human population.

### **The Behavior of Consumers during a Crisis**

A buyer can synonymously be identified as a consumer. Consumers are people who have needs or desires which they purchase and then dispose of them in terms of consumption. Typical consumers depend on products from agriculture and industries, services, shelter, and wealthy (Grundey, 2009). All consumers have different needs and desires, and therefore they can never be the same. Each buyer or consumer has his or her internal and external factors that influence their behavior. Consumers' behavior is important, and it influences a buyer's decision to search, purchase, use, evaluate, and dispose of a product or service (Valaskova et al., 2015). Many social issues influence macro consumer behavior; however, individual factors also impact this behavior (Solomon et al., 2016). According to Flatters and Willmott (2009), consumers achieve satisfaction, happiness, or their need for essential goods and services through the purchase of goods.

Valaskova et al. (2015) highlight three groups of approaches to explain the behavior of consumers: (i) Physical based (ii) sociological-based, and (iii) economic-based. The first approach is associated with the psyche and behavior of the buyer. The second approach is linked with consumers' reactions in different circumstances, and these reactions are influenced by social occasions, social leaders, and many other social factors. Lastly, the economic approach is based on the knowledge of micro-economy; the consumers determine what they need and what they do not need. The interests of consumers or consumers are traded within the economy. The behavioral patterns of consumers changed after India underwent liberalization. The country defeated individualism and gave embraced collaboration through a brand culture. Social leaders such as Baba Ramdev and the Gandhian minimalistic lifestyle influenced a behavioral approach that led to concepts such as "Swadeshi" and "Back to Basics." Different classes in society showed different consumer behaviors. According to Amalia et al. (2012), people cannot be the same, and they cannot have similar perceptions about situations with negative effects on the economy or even a crisis. When crises emerge, consumers tend to change trends in their purchase activities and processes. Among the critical factors that influence consumers' behavior during a time of crisis are the risk attitude and perception. Risk attitude is a person's way of interpreting the risk of content and the level to which he or she shows no interest in the risk's content. On the other hand, risk perception is the way a buyer interprets the chance of being exposed to a certain risk. Personality characteristics that arise due to a crisis or a pandemic can also influence consumer behavior. Some of these characteristics include value-conscious, materialistic, and risk-averse (Mehta et al., 2020). Generally, all these factors and their influence on consumer behavior lead to one central trend in buying and selling goods during a crisis. This trend is simplicity, which means that consumers seek means of transacting their business operations, which are not complicated but are value-oriented and simplify their lives. The change in the payment pattern of Indian consumers led to the researcher's interest to explore the impact of Covid on the payment patterns of Indian consumers.

### **Research Gap: Analysis of Literature Review**

After careful analysis of more than 30 research papers in areas of Non Cash transaction with help of digitalization, it is realized that the papers focus on the problems faced by Indian Consumers. In this paper, I have focused on the financial transaction affect on the payment system. For this purpose this research paper has divided into two parts for the study one is During lockdown(From March.2020 To Jube.2020) Phase 1,2,3,4 and second is During Unlock down (From July.2020 To Oct.2020) Phase 1,2,3,4,5,6 with the different Phases.

### **Impact of Covid-19**

The Coronavirus disease is the second greatest 'catastrophe' the world has ever seen since World War II (BBC, 2020). Studies and available data show that at least every country was affected by the COVID-19 virus (Chaudhry et al., 2020). The virus started in China and spread on the entire planet. Over time, the epicenter of the virus moved from China to Europe and the United States. Millions of people contracted the virus, and millions of people died from the disease (The New York Times, 2021). According to Ozil and Arun (2020), billions of people were indirectly affected by the pandemic. Evidently, the disease put the global economy at a high risk of collapsing. The foundations of trade in the world were shaken, and observers describe the pandemic as the beginning of de-globalization. Nonetheless, there is a likelihood of a global recession that is greater than the losses incurred during World War I and World War II combined, at least as argued by some analysts (World Bank, 2020).

### **Research Methodology**

#### **Research Design**

This study adopted a quantitative research design method. Quantitative research involves systematically investigating phenomena by collecting quantifiable data and computing statistical or mathematical operations on the data collected (Apuke, 2017). In most cases, the data collected is secondary data that exists in potential documents or customers/participants using a sampling technique. Some of the common data collection techniques employed includes surveys, questionnaires, polls, among many others. In other cases, for example, in this study, the data can be readily available in documents and can be retrieved as secondary data. The data is in numerical form to allow statistical manipulation to answer the research question(s). After an analysis of the numbers, it is possible to predict future trends or make conclusions accordingly based on the objective of the research.

Generally, in this study, statistical methods were used to collect quantitative data, and a mathematical framework and theory were deployed to understand the impact of Covid-19 on the payment patterns of Indian consumers. There are two types of quantitative research methods: primary quantitative research methods and secondary quantitative research methods. Primary quantitative research collects data directly from the field or population depending on the availability of data collected in previous research studies. On the other hand, secondary quantitative research involves the use of the already existing data or secondary data. Secondary data is usually in summary form, and it is collated to increase the validity and reliability of research. Sources of data include the internet, research reports, articles, libraries, etc. This study employed secondary quantitative research because it helps validate the data collected using the primary data collection techniques and strengthens or proves the previously collected data. This study's secondary data was obtained from the RBI, government websites, annual reports, and e-libraries of various institutions. Pair t-test was used to test and compare two related samples. The analysis is done to determine the impact of Covid-19 on the payment pattern of Indian consumers.

Data collection was done by visiting the RBI website and obtaining secondary data. Only data that shows the change in payment patterns on various platforms was collected. Analysis and interpretation of the data were done through tables, diagrams, and graphs. These presentations were used to show the trends in the buyer's payment patterns during lockdown and during the Unlockedown. By observing the trends, it is easier to determine the impact of the virus on the payment patterns besides the statistical analyses. Statistical analysis of the data was done using a paired t-test analysis, which helped the researcher to observe the structural payments patterns before the Covid-19 pandemic and during the pandemic. Results from the analysis helped the researcher determine if to accept or reject the hypothesis formulated for this study.

In India, consumers use various E-Payments platforms to make their transactions. Some of the E-Payments platforms include:

- Credit Transfers.
- Debit Transfers.
- Card Payments.
- Prepaid Payments.
- Paper Based Instruments.
- Mobile Payments.
- Internet Payments.
- Cash Withdrawal at ATM.

**H<sub>01</sub> Null Hypothesis**

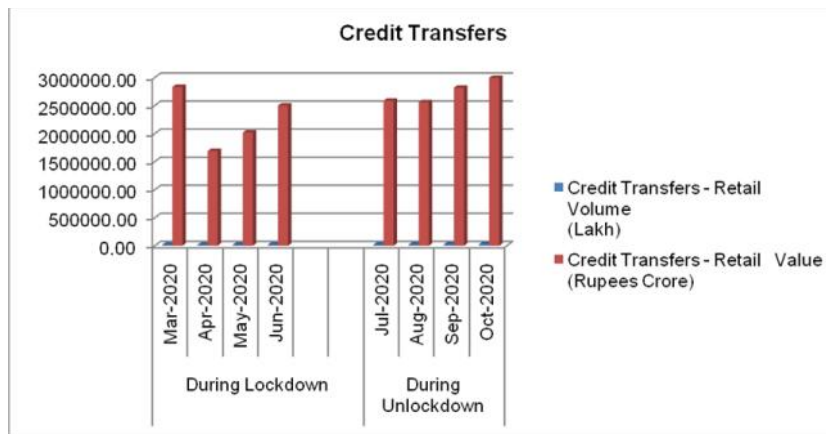
There are no Significant changes in Payment volume and Payment Pattern During lockdown Covid-19 and Unlock down covid 19.

**H<sub>02</sub> Null Hypothesis**

There are no Significant changes in Payment Value And Payment Pattern During Lockdown Covid-19 and During Unlock down Covid 19.

• **Credit Transfers**

Credit transfers include AePS (fund Transfer), APBS, ECS, IMPS, NACH CR, NEFT, and UPI. Data obtained from the RBI shows that Credit Transfers declined during the lockdown period. The figure below is a summary of the trend in Credit Transfers during the Covid-19 period.



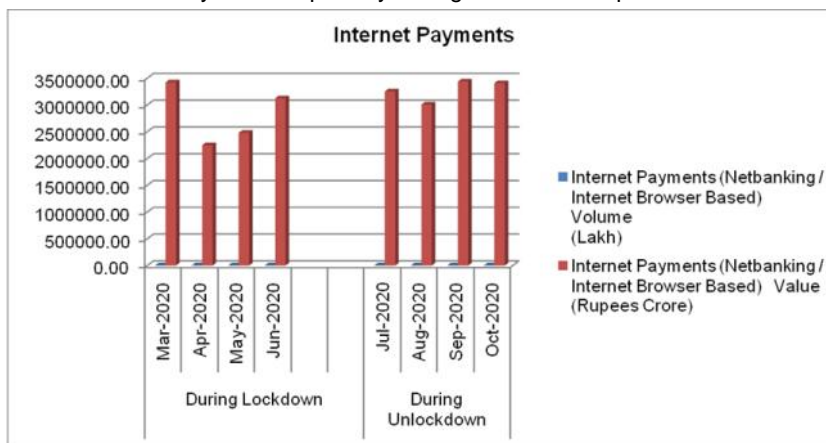
Sources: www.dbie.rbi.org.in

**Figure 1: Credit Transfers**

The Figure 1 above is a general presentation of the trend for all credit transfers. However, a closer review of the data obtained from the RBI shows that some of the transfers such as AePS were not stable because they increased and declined in different periods during the Covid-19 pandemic. Others such as APBS declined following the lockdown, while UPI showed an upward trend and it became as the alternative to Cards (DBIE-RBI : DATABASE OF INDIAN ECONOMY, 2021).

• **Internet Payments**

Data obtained from RBI showed that the payment pattern of Indian consumers using Internet Payments declined during the Covid-19 pandemic. A graph (Figure 2) obtained from the RBI shows a decline in the use of Internet Payments especially during the lockdown period.

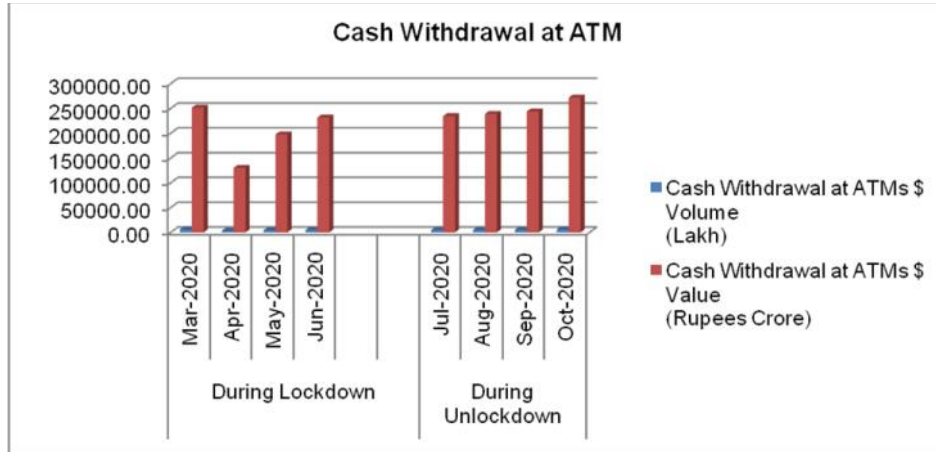


Sources: www.dbie.rbi.org.in

**Figure 2: Internet Payments**

- ATM Cash Withdrawals**

Data obtained from the RBI shows that there was a decline in the use of debit cards, credit cards and prepaid cards. The use of ATM cards is estimated to have decline by 5%. The graph below (Figure 3) shows the trend in payment patterns of Indian consumers in the use of ATM cards.

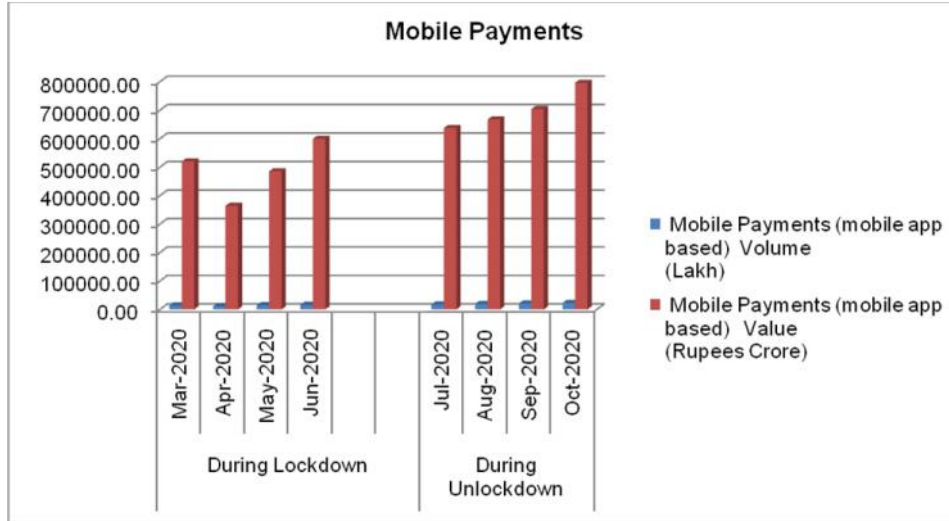


Sources: www.dbie.rbi.org.in

**Figure 3: Cash Withdrawal at ATMs**

- Mobile Payments**

Another important payment system that became the trend not only in India but the entire globe is the use of mobile payments. The data obtained from the RBI showed that mobile payments were on the rise during the lockdown periods. The figure below shows the trends of the use of mobile money transfer services in the lockdown period and during the IUnlockdown period.

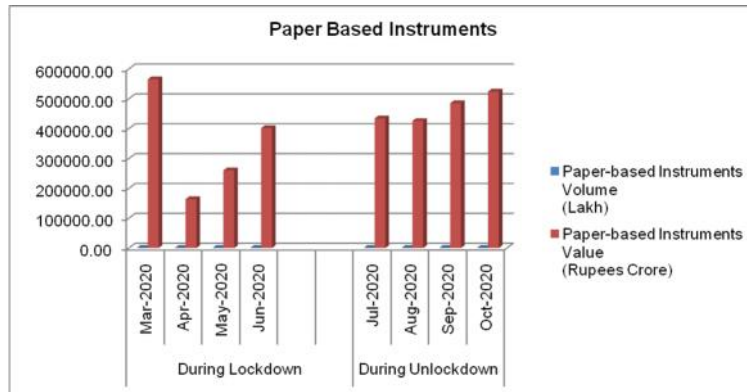


Source: www.dbie.rbi.org.in

**Figure 4: Mobile Payments**

- Paper Based Instruments**

The use of paper based instruments drastically declined during the Covid-19 period. This can be attributed to adherence to the measures to contain the virus such as avoiding contact. Since paper work involves a lot of physical contact, it is predictable that its use could be significantly minimized. The graph below (Figure 5) shows the trend in the use of paper work during the Covid-19 pandemic as obtained from the RBI.



Source: www.dbie.rbi.org.in

**Figure 5: Trend in the Use of Paper Based Instruments**

- **BHIM Aadhar Pay**

The use of BHIM Aadhar Pay is another important platform launched by the National Payment Corporation of India that was evaluated. Data obtained from the RBI shows that the platform was being widely used. The trend in its use increased especially during the Covid-19 pandemic because of its ease of use and it facilitates zero contact since the government directly transfers cash into the accounts of people. The figure below shows the trend in the use of the platform during the covid-19 pandemic.



Source: www.dbie.rbi.org.in

**Figure 6: BHIM Aadhaar Pay**

### Analysis and Results

Analysis of the data obtained from the RBI was done using a Paired Sample T-Test. This test is also known as the dependent sample t-test. This statistical computation aims to determine if the mean difference between two sets of data is zero. We measure each set of data twice, and the result is a pair of observations. There are two competing hypotheses in a paired sample t-test, the null hypothesis, and the alternate hypothesis. The true mean difference between sets of data is assumed to be zero for the case of a null hypothesis. Random variation is the underlying explanation under this model. The true mean difference between sets of data or paired samples is not equal to zero for an alternate hypothesis. The expected outcome of the analysis determines the form the alternate hypothesis takes. A two-tailed hypothesis is used in cases where the direction does not matter. The data obtained from the RBI was analyzed for "Paired t-test" between the two pairs of data, i.e., in the during lockdown period March 2020, April. 2020, May. 2020, June. 2020( 4 Months) and during the Unlockedown Covid period. July.2020, Aug.2020, Sept.2020, Oct.2020.(4 Months) The following tables are the summary of the entire data sets: in which includes (1. Credit Transfers 2. Debit Transfers. 3. Card Payments. 4.Prepaid Payments.5. Paper Based Instruments.6. Mobile Payments.7. Internet Payments. 8. Cash Withdrawal at ATM. (volume...)

**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	During lockdown	23942.4238	8	27112.04953	9585.55704
	During unlock	32044.9637	8	36936.63247	13059.07165

**Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	During lockdown & During unlockdown	8	.998	.000

**Paired Samples Test**

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	During lockdown – During unlock	-8102.54000	10056.71610	3555.58607	-16510.16506	305.08506	-2.279	7	.05

**Interpretation**

An analysis of the data gave a P-value of less than 0.05 ( $p < 0.05$ ). Therefore, we accept the alternate hypothesis. Therefore, the null hypothesis will be rejected:  $H_0$ : 1. There is no Significant changes in Payment volume and Payment Pattern During lockdown Covid-19 and Unlock down covid 19. Therefore, based on these results ,During Lockdown (M= 23942.4238 , SE=9585.55704) than during Unlockdown (M=32044.9637,SE=13059.07165)  $t_{(7)} = 2.279$   $p < .05$  the researcher concluded that the Covid-19 pandemic had an impact on the payment pattern of Indian consumers. The cause of this change in the pattern is attributed to lockdown that made consumers purchase goods and services with minimal movement from their places of residence and minimize the risk of transmission and contraction of the virus.

**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	During Lockdown	3141541.0000	8	4413445.40584	1560388.58743
	During unlockdown	3825855.1250	8	5172252.72863	1828667.48921

**Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	During Lockdown & During unlockdown	8	.999	.000

**Paired Samples Test**

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	During lockdown – During unlock	-684314.12500	782369.67102	276609.44989	-1338391.53842	-30236.71158	-2.474	7	.043

**Interpretation**

An analysis of the data gave a P-value of less than 0.05 ( $p < 0.05$ ). Therefore, we accept the alternate hypothesis. Therefore, the null hypothesis will be rejected:  $H_0$ : There is no Significant changes in Payment Value And Payment Pattern During Lockdown Covid-19 and During Unlock down Covid 19.. Therefore, based on these results ,During Lockdown (M=3141541.0000,SE=1560388.58743)than during unlockdown period there is a significant change.(M=3825855.1250,SE=1828667.48921)  $t_{(7)} = 2.474$   $p < .05$  the researcher concluded that the Covid-19 pandemic had an impact on the payment pattern of Indian consumers. The cause of this change in the pattern is attributed to lockdown that made consumers purchase goods and services with minimal movement from their places of residence and minimize the risk of transmission and contraction of the virus.

**Discussion**

Covid-19 had a significant impact on a majority of the sectors of the global economy. Consequently, consumer behavior drastically changed, and this includes the way people purchase goods and services and make payments for these services. The lockdowns and social distancing measures also



restricted the choice of places where an individual could shop. The shift in mobility and its resulting shortage in mobility localized almost all human activities, including schooling and shopping. People were now doing these activities from their homes. Consequently, consumers had to change how they make payments for the goods and services purchased. One way people started to pay for the items purchased is through digital platforms such as the internet and mobile banking. In India, there was observed a sharp growth in digitization during the Covid-19 pandemic period. The physical restrictions and lockdowns made consumers start using digital payments. India had tried to move to a cashless payment system in the year 2016, but it did not take root. However, an observed consumer behavior change, especially in the way consumers make their payments, was caused by Covid-19. Data obtained for this study and its subsequent analysis shows that Indian consumers are finally embracing a digital payment economy, which does not depend on liquid cash.

Marketing professionals have in the past investigated new marketing and economic models. For example, there has been an emergence of online ready-to-eat food delivery companies. Other companies are branding themselves and changing the way they conduct their businesses through innovation and modern technology. Part of these innovations is the use of cashless payment systems. All these measures are in an effort to maximize economic recovery while ensuring that populations are protected from pandemics such as Covid-19. A shift in the payment systems protects not only public health but also boosts local retailers in their business operations.

The change in consumer behavior, including a shift from one payment system to another, especially in times of crisis, has been named in literature as consumer spirituality (Kelemen & Peltonen, 2005). According to Kale (2004), consumer spirituality is the various related practices and processes in which consumers engage when purchasing products and services, which yields 'spiritual utility.' In modern times, people are seeking solutions and ways that can transform their minds and bodies, and they see the value of that transformation. Literature and data collected and analyzed showed that the Indian consumers had shifted their modes of payments during the lockdown. This change could be embraced as the best practice in the purchase and consumption of goods and services. The Indian government has also encouraged digital payment systems by providing incentives and cash backs to merchants and customers. The National Payments Corporation of India (NPCI) activated a cashback scheme for customers and merchants of the Bharat Interface for Money (BHIM) app.

### **Conclusion**

The Covid-19 pandemic affected economies in different ways. One of the major impacts of the virus is the change in consumer behavior. It is observable that consumers have changed their consumption habits and the way in which they carry business transactions due to the effects of Covid-19. Any of consumption is either location or time-bound or both. Consumers' behavior develops and changes over time, depending on when and where they are or depending on the prevailing circumstances. In India, the lockdown and social distancing measures to control and combat the novel Coronavirus generated significant disruptions in the way consumers made their payments for goods and services. While time was available but movement restricted, new creative and innovative ways for consumers to make their payments were improvised. It is evident that consumers shifted from cash payment systems to cashless payment systems such as digital payment systems and mobile payment systems. The researcher concludes that Covid-19 had a significant impact on the payment patterns of Indian consumers.

### **Recommendations**

- Further research may include effect after covid 19 on the overall payment system.
- Comparative analysis of Export and Import of India.
- Time Period of Research may be increased from 5 months to 10 months or 12 months.
- GDP , Cash Reserve Ratio, SLR
- Effect on Money Market Before, during and after covid 19.
- Government Security Market Before during and after covid 19.
- Agriculture & Industrial Sector of India Before, during and after Covid19
- Bank Credit Fluctuation. & Digital Lending App.
- Interest Rate of Senior Citizen.
- Analysis of Non Banking Financial Companies.
- Public awareness initiative of RBI Sachet.

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