

IMPACT ON HOUSEHOLD CONSUMPTION PATTERNS DUE TO COVID-19 IN INDIA

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Abstract-Covid-19 has created fear amongst the people and government. Government policies and strategies to control covid-19 have created a huge economic loss to the country. In March 2020, government of India implemented lockdown when cases of covid-19 were rising rapidly. Later relaxation was provided but another peak of cases was seen in the start of 2021. Due to these multiple lockdowns many businesses were shut, and it impacted GDP very severely. In this paper, researcher analyses the impact of covid-19 lockdown on household consumption patterns in Delhi. Delhi is the capital of India and it would provide significant data and help other Indian states. Researcher analyse the effect of covid-19 lockdown on household consumption patterns and see whether they will be able to regain that confidence. Previous researcher provides a significant result, but they consider only one factor while estimating household consumption. Researchers analyses all the factors and gain data from previous literatures while estimating the consumption expenditure patterns. Researcher uses both qualitative and quantitative data to provide a strong evidence. The survey in this search will provide an in-depth idea of people's situation in this pandemic lockdown. This research will help government and other states in policy making with an idea of economic growth.

Keywords: COVID, Lockdown, Consumption expenditure, economic growth, supply chain.

1. INTRODUCTION

In the year 2019, before covid-19, Indian economy was performing well and growing. As per the reports growth was expected to grow at a rate of 2.5% by 2 April 2020 (The Economic Times, 2020). According to the paper Barbate et al., 2021 size of world economy in 2017 was at 80 trillion. Indian economy is the world's fastest growing economy along with china (Akalpler & Hove, 2019). Human consumption around the world varies from person to person. For example, a poor person will not consume the same goods and services which is consumed by a rich person or average person. Consumption and production are interconnected to each other although in this research we study about the household consumption but reviewing the consumption and production are interconnected will help us to answer our research question and would give more clarification of the topic. In late March when covid-19 hit India, government of India implemented complete lockdown. During this lockdown many people enjoyed being at home and many people were unhappy. Lockdown changed the consumption pattern of many households in India. During this lockdown income pattern of household also changed and many people lost their jobs. There are many researches which have tried to access the impact of covid-19 on the Indian economy and on developing countries. However, none of the researchers have investigated the deep effect on household consumption patterns. India has witnessed many diseases in the past such as smallpox, plague, and polio. Due these diseases Indian economy had severe impact on it. However, the virus first spread in china and later on it spread to all other countries. Covid-19 turned out to be the biggest health crises in the history. On January 20, 2020 first case came to India. Since then the cases are rising rapidly and now when I am writing this it recorded 2.5 lakh new cases (World Health Organization, 2021). However, the cases are declining at the moment, but the highest cases recorded in India in a single day is 4.5 lakh (World Health Organization, 2021). Indian government has still implemented lockdown but not as severe as before and now lockdown is there in the location where there are most covid-19 cases recorded, such as Delhi, Mumbai and etc. however state governments are giving relaxation to the zones which are outside the "containment zone or high risk zones".

This research aims to study the impact of covid-19 on household consumption pattern in Delhi. In the second section, research provides a literature review and discusses the previous techniques used to determine the impact of covid-19 on household consumption and factors which help in the growth of household consumption and those factors affected by this pandemic. In the third section of this research, it provides an aim for doing this research and question which are unanswered and need to be answered in dept. This research is based on the objective to how Indian government's policies to tackle this pandemic are affecting the household consumption patterns. In the fourth section of this research, it provides a methodology, this section better explains the procedure to do this research and how the data collection will be done and tools which will be used to collect the data. It further mentions the type of the study and the analyses method used to answer the research questions. In the fifth section of this research, it explains the importance of this research and how can this research help government of India in talking this crisis. This section further explains how this research stands out of other researches.

2. LITERATURE REVIEW

The outbreak of Covid-19 has impacted the world very severely. Covid-19 has not only brought the health crises but also impacted the global economy. Due to lockdown and restriction many industries and sectors has been severely impacted. Nationwide lockdown in India has highly impacted the lower section of the society. In the

quarter of April-June in 2020, GDP of India shrank by -23.9%. Mahajan & Tomar, 2020 discusses the role of online market in India during covid-19 and how the food supply chain has affected the retailers. Due to lack of warehousing facility in India, wastage of fruits and vegetables accounts to 16% (Financial Express, 2019). As the share of online grocery stores are increasing and it constitutes a small population in the total urban and rural grocery store chain in India. Online grocery stores have witnessed a growth of 106% in the year 2019 (RedSeer, 2019). Due to border closure both the retailers online and offline have seen an impact on their supply chain. The effect of reduction in supplies can be seen more on offline retailers than online retailers. According to the literature, due to disruption the availability of a product with online retailers fell by 10% and little increase in the prices (Mahajan & Tomar, 2020). The farmers who are not able to bring their product to cities or have no knowledge about the online retailers have faced a huge income loss.

Narayanan & Saha, 2020 seeks to examine the prices of food market mainly focusing on wholesale and retail. The paper seeks the data from the 21-day lockdown period and the prior weeks. Literature conducts a dipstick survey to better analyse the effect during the pandemic. While conducting the survey he uses the help of student volunteers from 21 locations and 14 different cities of the country. Prices of Perishable items plumed by 120% and in some cities, it was impossible to procure it. Prices of dry-fruits also dwindled as companies were not supplying and it was hard for retailers to refill the stocks. Supply shock has affected the consumption of the household because due to restriction and lockdown prices of these food were rising steeply. According to the paper a press release by the reserve bank of India's monetary policy committee suggested that due to supply shock in the market, prices of the pulses are expected to rise. Literature suggested that government should ensure the operation of basic food processing industries and should help financial support to these industries for resuming functioning and safety of workers from these industries. There are many small unit industries that operates in the local region and should ensure functioning of these industries also as it would help in building back the supply chain in the small cities and towns.

Sheth, 2020 examines the consumer behaviour during the covid-19 and explores if the consumers able regain their behaviour or habits post the pandemic. Consumers develops habit of where to spend, how to spend and what amount to spend over a time (Sheth & Kellstadt, 2021). Lockdown and social distancing rules have restrained consumers from the places that they chose to shop from earlier. Working of schools, offices and shopping all have been constrained to home now. People are now more flexible with the time, as they do not have to plan for going to work, school or shopping. With the fear of pandemic, consumers are now stock piling of essential goods for consumption which is creating a shortage of space in the houses of these consumers. Before covid-19, people used to go out with their friends and family to enjoy the meantime, consumers used to watch movies go to restaurants or pubs to enjoy or even go their friends place to have fun. Now with this pandemic, people are more involved in technology, whenever they want to talk to their friend, they talk over zoom calls and most consumers now have adopted the social media in highly compressed cycle. Literature concludes by saying that consumers are now more interested in virtual world than physical world. As the consumers are almost in a house arrest due to the pandemic lockdown, they have gained and adopted new technologies and new habits which will facilitate the work, school, and shopping in a more convenient and flexible way.

Srivastava & Sivaramane, 2020 provides evidence of effect of change in income on household consumption patterns due to covid-19. This paper examines the consumption patterns of different households, different consumer behaviour due to change in the income due to this

pandemic. The paper uses a linear approximation-almost ideal demand system (LA-AIDS) model to get exactly the choice of a consumer. Using this model, literature accesses the consumer behaviour and estimates the expenditure elasticity of food and non-food items. Hackman estimation is used to overcome the problem of zero observation. While it is difficult to derive the price of non-food items, price index is constructed to avoid any errors. According to the paper, average Indian household spends 44.27% of its total consumption expenditure on food and rest is spent of non-food expenses. Household income is directly related to the pattern of household expenditure. Literature concludes that the reduction in income due to lockdown had reduced the expenditure patterns of households and hence non-food and food expenses declined by 7.6% and 4.98% respectively. Government should intervene with different schemes in order to prevent undernourishment and deflationary pressure in the economy.

3. AIM AND OBJECTIVE

Covid-19 was an unprecedented event in the year 2020 that has gravely affected health, economy and lifestyle. In the late march, when government of India implemented lockdown due to covid-19, daily lifestyle and consumption patterns of household changed during this period. Many researchers have done a study on the impact of this pandemic on Indian economy and change in the lifestyle of the consumers. The aim of this research is to analyse the impact of covid-19 on consumption pattern of household. This research objective would be explored with a mixed method survey that will analyse the consumption patterns for the population of Delhi which is capital of India. It would provide a significant data and aid other states and government to examine their policies and help stop this pandemic. Although it is difficult to access the effect of lockdown on people, but we will be using previous studies to better understand the situation.

Consumption is the main component of GDP formation. Consumption comprises of different factors under household consumption. The previous studies have countered the effect of lockdown on consumer behaviour but there is not a strong evidence that can prove. The scholars have done a research on the basis of just a survey and

does not have an exact evidence of how consumer behaviour is changed and by how much. We will be linking the purchasing power of different household and their income as it is directly related to the consumption. This research will clarify the impact of covid-19 pandemic on Delhi. This research will aim to fill the gap between the purchasing power during lockdown, consumer behaviour and price rise during this pandemic. The objective of this research will be to answer the following questions:

- Impact of covid-19 and lockdown on the purchasing power of the households?
- Due to lockdown, is the supply impacted?
- Which factors have mostly impacted the consumer behaviour?
- Does the Price rise during pandemic has affected the consumers?

The research questions above will help the researcher find an accurate qualitative analysis of the impact that this pandemic had on the Indian state of Delhi. Further, the research will also explore the supply chain disruptions that occurred in Delhi and if the prices have been affected due to this. It will also investigate the number of job losses in Delhi and how the people residing there have been affected due to the pandemic. The research will explore people's thoughts and feelings over this pandemic loss and how they have modified their new lifestyle and their consumption patterns and priorities.

We will also try to find the linkage between the income and consumption. Diacon & Maha, 2015; Srivastava & Sivaramane, 2020 researchers have analysed the relation between different low-key income countries and have found that the income has greater importance for consumption in low- and high-income level and middle level income are less associated with income and consumption.

This research will also try to find the economic indicators such as unemployment rate in Delhi, inflation rate in Delhi and GDP of Delhi. We will be using these economic indicators to provide a strong support to our research. While doing the research we will also see whether the consumer's will be able to gain the confidence of consumption of non-food expenses again? There is no previous research on impact of covid-19 on household consumption pattern which has taken into considered all the factors associated with consumption and for better understanding the impact of this pandemic, all the factors should be considered.

4. METHODOLOGY

The data in this research will be taken from online sites and through a mixed method survey designed by the researcher. The survey will have a mixed batch of question that will analyse both qualitative and quantitative data. A qualitative research usually involves the collecting and analysing data from people's opinion. It helps to gain in-depth knowledge about the problem to generate ideas of research (McCusker & Gunaydin, 2015; Zhang & Wildemuth, 2009). The analysis of a qualitative data from the survey will give a detailed understanding of the responses and will help the researcher draws a thematic analysis of the impact of lockdown on household consumption pattern. A quantitative study involves the collection and analyses of numerical data. The data collected from the survey will help to make predictions and generalize the results to a wider population (McCusker & Gunaydin, 2015). In this study quantitative data will be presented in form of percentage to calculate how many people were affected due to the pandemic lockdown.

The data for the study of this research will be obtained from Statista, Centre for Monitoring Indian Economy Pvt. Ltd. (CMIE). These sites will be used to back up our conclusion and provides us with an exact figure of inflation and unemployment. we will be collecting online data from the topmost website in India (Amazon). This website sells almost all the goods online and it also provides grocery delivery and has its own supply chain. There are very less online stores which are specialized in all the grocery and other shopping. We will be viewing the product availability on that site and prices of general goods and food items. We will also be reviewing the prices of general goods on big basket and other online grocery stores so that we get a comparison and see the change in the prices of same product on different sites.

In this study, the survey will be designed for participants to fill online. It will have mixed batch of questions like multiple choice questions, rating questions, open ended questions, and a few demographic questions. The use of having open ended question will answer the qualitative aspect of the study. It will help to minimize categorization and thus will generate effective and accurate responses (Braun et al., 2020). The survey Responses will be analyzed by using an online survey tool like Qualtrics (Molnar, 2019).

Narayanan & Saha, 2020 has collected data from 114 different data centers of state civil supply departments. This research has used data from Delhi which will form the basis of this research. The data from Narayanan & Saha, 2020 will help the researcher to gain knowledge and support the conclusion of the survey. Thus the result of Narayanan & Saha, 2020 can be considered highly significant in order to answer the research question.

Once the survey is completed by at least 100 participants residing in Delhi, the researcher will develop an equation based on the survey results and compare that with the previously gain data. The comparison will give a solid basis to this research question as it will support to accumulate all the previous research objective into one paper. The equation is:

$$\ln Y_{it} = \beta_0 + \beta_1 \ln \text{Income}_{it} + \beta_2 \ln \text{prices}_{it} + \beta_3 \ln \text{supply}_{it} + \beta_4 \ln \text{Habit}_{it} + \text{Cit}$$

The variables in the above equation represents where, $\ln Y_{it}$ represents the household consumption I is the individual and t the time frame. Income_{it} represents the income of the individual during the pandemic. $\ln \text{prices}_{it}$ represents the prices of general goods. $\ln \text{Habit}_{it}$ represents the change in the consumer behavior during pandemic.

Risk map of India's household consumption behaviour

Rural households account for 57% of all India household consumption expenditure while urban household consumption accounts for 43% of total consumption.

RURAL CONSUMPTION

% share of total rural household expenditure

Row Main occupation source of household income

1	Farming and allied agriculture business
2	Non-farm micro business owners, individual service providers, petty traders, small shop owners
3	Salaried job (bank, govt, school teacher, company), self-employed professionals (doctor, lawyer, accountant)
4	Casual labour of all kinds
5	Other sources (remittances, pensions)
6	Total

■ Totally at risk ■ Partially at risk ■ Relatively safe

Income band of rural households			
Poorest 40%	Middle 40%	Richest 20%	Overall rural
7.5	13.6	9.2	30
2.5	5.0	6.1	14
1.6	5.9	10.6	18
15.3	13.8	-	29
2.0	3.0	3.9	9
29	41	31	100

URBAN CONSUMPTION

% share of total urban household expenditure

Row Main occupation source of household income

1	Salaried people and self employed professionals
2	Petty trader/shop vendor/individual service provider/shop owner/businessmen
3	Casual labour
4	Live on agriculture income
5	Live on rent, investments remittances from abroad etc.
6	Total

Income band of urban households			
Poorest 40%	Middle 40%	Richest 20%	Overall urban
6.3	17.1	19.4	43
7.2	12.7	9.1	29
8.2	9.5		18
1	1.5	1.2	4
1	2	2.6	6
24	43	33	100

Figures have been rounded off

Source: ICE 360° India household surveys (2014, 2016); 2018 samples

5. SIGNIFICANCE

Covid-19 has impacted the world economy very severely and in India situation is getting worsened by day. There are few researches which have tried to study the impact of covid-19 pandemic on household consumption pattern but all of them focus on only single factor which influences the consumption. This research provides an in detail impact of covid-19 pandemic on household of Delhi including all the factors necessary which can influence consumption. This research also helps in finding the reason for sudden fall of consumption and how severely the pandemic lockdown has impacted the lives of the people. As the cases in India are rising suddenly, this research will be beneficial to the government bodies and it will help them to create or modify policies for the people. Moreover, this research will help government to support people financially and help to gain back the confidence among the people which is lost during this pandemic.

The objective of this research has been individually addressed in different papers earlier, however, there has not been any study that measures the impact of the pandemic on household consumption pattern while studying both qualitative and quantitative aspects. This research will give an in-depth idea of people's situation and how they

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responded during the stressful pandemic lockdown times. The survey would be designed to cater a larger population which will further help us to understand the impact with respect to socio-economic patterns of the country. The survey responses also help us to understand if people residing in Delhi have been able to adopt the new lifestyle change due to the pandemic. Overall, the research questions will help other researchers find a theoretical basis to plan their research and evaluate the risk and the impact of the covid-19 pandemic on other GDP aspects of the country.

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