

IMPACT OF COVID-19 ON CONSUMER PRICE INDEX IN INDIA

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ABSTRACT

COVID 19 has turned the world upside down. The economic system is deeply wounded due to this pandemic. It is an unparalleled challenge for India due to its large population. The purpose of the study is to examine the impact of COVID 19 on the Consumer Price Index. The study was conducted for seven sub groups of CPI in India. Secondary data for the period of four months of Jan. to April 2020 was used for this research based on price movements. The objective of this study is to find out the impact of COVID 19 on CPI. It is the most important measure for inflation. Researchers have taken pre and post COVID 19 periods to measure effect on CPI. The study concluded that there is a significant difference between pre and post period price movements in selected subgroups.

KEYWORDS: COVID 19, Consumer Price Index, Secondary Data, CPI, Macro Economic Indicator.

Introduction

Consumer Price Index measures changes over time in the general level of prices of goods and services that households buy for their consumption. CPI is widely used as a macro economic indicator of inflation as a tool by the government and also central banks for inflation targeting and for monitoring price stabilities in the country. It is also used for indexing the dearness allowances to employees for increase in prices. In the year 2013 the CPI replaced the wholesale price index (WPI) as a main measure of inflation. The most important category in CPI is food and beverages (45.86 % of total weight) of which cereals and products (9.67%), milk and product (6.61 %), Vegetables (6.04%), oil and fats (3.56%).

COVID 19 directly impacted economic activity in India due to lock down. Government has taken early action to limit the spread of COVID 19, by ordering lockdown. However cases are increasing fast in some areas. The impact of COVID 19 on inflation is abstruse. It is very difficult to predict the trend of price movements in lock down as it may be distress selling in rural areas and at the same time urban areas are facing problems with supply chains.

In this paper researchers have selected seven subgroups of CPI. Each subgroup is having different price movements. This research will help us to understand how this pandemic situation affects CPI for the study period.

Research Gap

The analysis of previous research for the present scenario indicated that most of the studies have focused on the impact of COVID 19 on all sectors of the economy. Consumer Price Index is used as an important macroeconomic indicator of inflation. It affects the economy in several ways so the present study is intended to discuss the impact of COVID 19 on CPI in Indian scenario.

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Objectives of the Study

The main objectives of the present study are:

- To study the impact of COVID-19 on selected subgroups of CPI
- To measure the pre and post COVID-19 pandemic effect on selected subgroups of CPI

Research Methodology

• Selection of Data

This study is analytical in nature. Due to lock down data collection agencies faced difficulties to collect data so the researchers have selected only sub groups from which the data were released. Seven sub groups' items have been selected for the study. These are shown below.

- Cereals and products
- Milk and products
- Fruits
- Vegetables
- Oils and fats
- Spices
- Health

• Collection of data

This study is based on secondary data only. It was collected from the respective website of NSO (National Statistical Office). Summarising editing and classification of data from the above mentioned sources have been done as per the requirement of the study.

• Time Period of Study

The study covered a period of four months starting from January 2020 to April 2020. Initial two months have been taken as prior period and subsequent two months have been taken as post period of COVID 19 for analysing the data.

• Hypothesis

In order to prove the study objectives, researchers have framed the following hypothesis.

There is no significant difference between pre COVID 19 period and the post COVID 19 period of CPI of selected subgroups.

• Techniques of Analysis

The data has been analysed with simple mathematical tools and statistical tools like mean, standard deviation and paired t test.

Limitation of the Study

Following are the limitation of the study:

- The study is based on secondary data.
- The study covers data on only seven groups of CPI.
- Researchers have taken data for only four months so results may differ another months.

Data Analysis and Interpretation

Table 1: Average Price movements of Selected Subgroups of CPI

Sub Groups	Pre	Post
1. Cereals and products	144.55	146.9
2. Milk and products	150.45	153.55
3. Fruits	142.5	146.2
4. Vegetables	183.85	162.95
5. Oil and fats	130.65	133.15
6. spices	151.45	155.15
7. Health	151.45	151.5

Source: Calculations based on secondary data

Table 1 shows averages of price movements of selected groups for the study period. The results show that subgroups from food and beverages which have the highest weight in CPI did jump in the post period except vegetables. According to above statistics customers paid less for vegetables in the lockdown period. In the post period cereals and products, milk and products, fruits, oil, spices became more expensive as customers scrambled to stock up essential things. This lockdown interrupted food supplied and it is clearly seen in price movements. It is endangered and causes a food crisis. From miscellaneous groups, there is no noticeable change in index of health services between pre and post period.

Table 2: Descriptive Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	150.7	7	16.36651	6.18596
	POST	149.914	7	9.28259	3.50849

Source: Calculation based on secondary data

Table 2 shows descriptive analysis provides the mean and standard deviation of subgroups under the study. It also provides standard error which helps in getting knowledge of confidence intervals around the estimated means.

Table 3: Correlation Results

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1		7	0.901	0.006
		PRE & POST		

Results show that there is high positive correlation depicted by Table 3 between indexes of pre and post period of selected subgroups.

Table 4: Hypothesis Testing for Difference in between Pre and Post Period

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	PRE & POST	0.78571	8.95594	3.38503	-7.49715	9.06858	0.23	6	0.824

0.824 > 0.05 HO: NOT ACCEPTED

Table 4 has reported the analysis of indexes which has tested whether there are significantly difference in the indexes of subgroups between pre and post period. Paired sample t test has represented the proving of hypothesis. Here the calculated value of t is 0.23. The calculated value is more than the critical value of t. Thus the null hypothesis is rejected and alternative hypothesis is accepted that there is a significant difference in the different subgroups price movements for pre and post period.

Conclusion & Suggestion

The purpose of this paper was to determine whether COVID 19 had an impact on CPI in India. Correlation techniques are used to explore the relationship among selected subgroup items. Researchers further tested a sample pair t test and found that there was a significant difference between prices of subgroups for pre and post COVID 19 period. It is very difficult to predict price movements now with the lockdown period because there may be distress selling in rural areas and at the same time short supplies in urban areas. Food and beverages items have the largest weight (45.86%) in CPI. If delivery blocks are not cleared then there will be a probability of lots of wastage and pile of stocks will lead to price rise even though supplies are enough. COVID 19 pandemic has damaged all sectors of economy. This coronavirus is still spreading rapidly in some areas so large parts of the global economy are closed. Due to lockdown informal workers have suffered a lot without regular incomes. It will directly impact on supply chain, food and livelihoods. Government should take proper measures to keep the agricultural sectors and supply chains so consumers from rural and urban areas get essential food items at a reasonable rate. Government has already taken some measures and given relief packages but it is not sufficient compared to this massive problem. We should need to spend more percentage of GDP on that. Government should need to respond aggressively and format policies for smooth markets functioning.

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