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DETERMINANTS OF INFLATION IN INDIA - A TIME SERIES ANALYSIS

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ABSTRACT

Through time series analysis of quarterly data from Q2 of 2006 to Q3 of 2020, this paper aims to ascertain the principal driver of inflation in India. For the analysis, the study employs new econometric approaches such as the Granger causality test, unit root test, and the autoregressive-distributed lag bounds test. Our estimates show that determinants such as expectations about future inflation, oil prices, output gap, currency rate, broad money growth, interest rate and food inflation exhibit long terms relationship with the dependent variable – CPI inflation. Granger causality test further reveals that the determinants such as expectations about future inflation, food inflation and money supply granger cause CPI inflation. This study has important policy implications as price stability not only keeps the interest rate in desired range but also brings more predictability, and transparency in an economy, thereby promoting higher investment and growth. Therefore, to effectively manage the inflation dynamics, a study of the driving factors of inflation can help predict the changes in inflation more accurately and effectively.

Keywords: Inflation, CPI-IW inflation, food inflation, oil inflation, exchange rate, interest rate, expected inflation, ARDL approach

INTRODUCTION

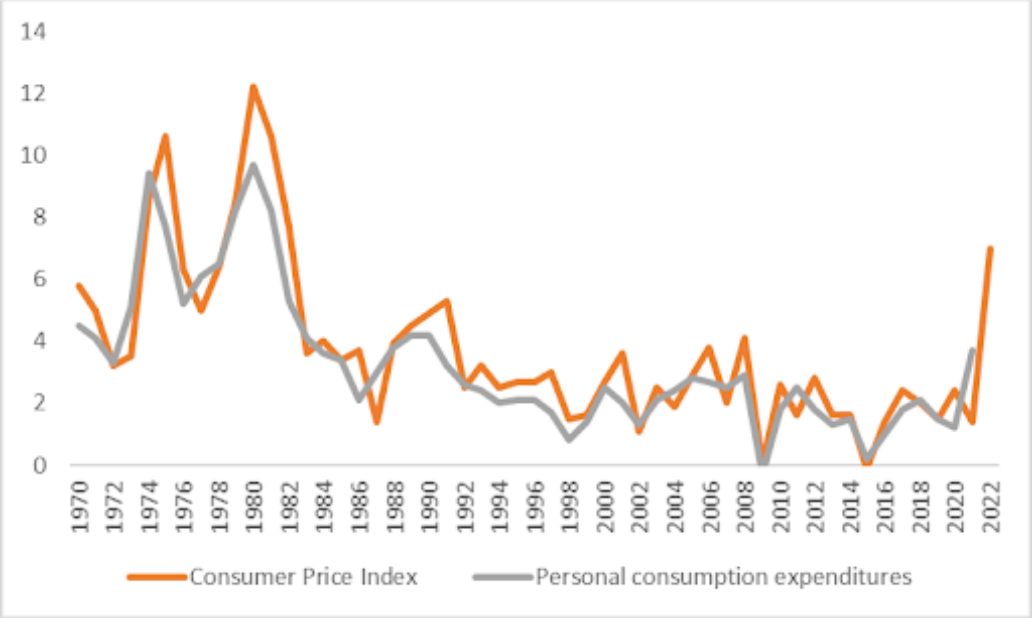
With the start of the pandemic in the early 2020s, countries across the world-imposed lockdowns to reduce the spread of the disease.

These curtailments resulted in the disruption of demand-supply balances in a world dominated by global value chains and fragmented production processes, where at least 70 percent of trade involves global value chains.

This imbalance, combined with obstructions in the supply chains of a few essential goods and shortages of crucial medical treatments, increases commodity prices.

For instance, food prices have risen very sharply across the world (Figure 1). The food price inflation increased by 78 percent from December 2019 to January 2020 in East and Southeast Asia. Europe and Northern America experienced an even greater increase in food price inflation, with food prices in Europe and Northern America being 100% higher in August 2020 compared to the same month the previous year.

Figure 1: US Consumer Price Index and Personal Consumption Expenditure



Source: *US Census Bureau; Author's Calculation*

This problem of high prices has been further magnified by the Ukraine War. This conflict between these two major raw materials exporting countries has increased the possibility of cost-push inflation, threatening to increase the cost of inputs all over the world.

High and persistent inflation, particularly for indispensable goods and services such as medical services and food items, is expected to have a severe impact on low-income household's living conditions as a major part of their earnings is typically spent on food and other indispensable activities.

Inflation imposes a disproportionately high burden on poor households, who are largely cash strapped. Therefore, even minor price increases affect poor households more as compared to rich households.

In addition, high persistent inflation also creates a vicious cycle of poverty. High prices make it impossible for poor households to afford good quality food, forcing them to eat low-quality food to avoid starvation and exposing them to the risk of various chronic diseases.

To ensure inclusive growth, it becomes imperative for policymakers and central banks across the world to control inflation. Therefore, this research on the Determinants of Inflation in India is significant because the findings will contribute to a clearer understanding of the shock transmission and the interplay between price increase and related economic factors.

1. EMPIRICAL STUDIES

In general, one of the major factors contributing to rising prices is the money supply. However, a detailed analysis of the literature yields five major sources of inflation; monetary shocks (Bashir et al, 2011; Bandara, 2011; Kishor, 2012; Ashra et al, 2004), Demand side, supply-side (or real) shocks (Loungani and Swagel, 1995), structural and political factors (Balakrishnan, 1991; Bhattacharya and Lodh, 1990).

Globally, a lot of studies have been conducted to understand inflation and its determinants. However, these studies have given different results depending on the region, methodology, and period.

Studies into the monetary factors of inflation, for example, have shown mixed results. Bashir et al. (2011) studied Pakistan's inflation and various contributing factors and concluded that an increased supply of money tends to put inflationary pressure on Pakistan. For the period 1993 to 2008, Bandara (2011) investigated several factors that could exert inflationary pressure in Sri Lanka. The study concluded that the excess supply of money has played a major role in increasing the inflationary pressure in Sri Lanka. Similarly, Adu et al. (2011) using the ARDL bounds test approach, argued that the excess supply of money has been a dominant force in increasing the general price levels in Ghana. On the other hand, several other studies have found either a negative or no relationship between money supply and inflation. For instance, Kim (2001) studied the impact of the monetary, labor, and foreign sectors in Poland from 1990 to 1999. The study found that the monetary sector doesn't influence inflation. Similarly, Altowaijri (2011) investigated the causes of an increase in general price levels in Saudi Arabia from 1996 to 2010, considering both internal and foreign influences, and discovered that there existed no relationship between price levels and excess money growth in Saudi Arabia.

Other variables have had mixed results as well. For the period 1981 to 2011, Haq et al. (2012) explored the interplay between the exchange rate and general price levels in Pakistan. They found that the exchange rate can explain the increased prices in Pakistan up to a great extent. Khan & Gill (2010) investigated the causes of rising prices in Pakistan from 1970 to 2007 and found similar results to Haq et al. (2012). However, there are other studies as well that show that the exchange rate doesn't play an important role in influencing inflation. Menji (2008) investigated the long-run factors of inflation in Ethiopia using the Co-integration technique and found that the exchange rate had an insignificant or negative impact on inflation in Ethiopia. Similarly, Bashir et al. (2011) and Bandara (2011) concluded that total output is positively related to inflation. However, Haq et al. (2012) claim that total output is not a major factor influencing inflation.

1.1. Studies in Indian Context

There exists a lot of literature that attempts to better understand the many elements that influence inflation in India. As developing countries like India are generally characterized by market imperfections and structural rigidities therefore many studies have been done to understand the supply side factors of Inflation. Buragohain (1997) studied the impact of sectoral price levels on inflation in India. He argued that the price of essential goods such as food plays a dominant role in increasing inflation in India because Indian families spend a bigger portion of their income on food. Balakrishnan (1991) used manufactured prices from 1952 to 1980 to investigate if the rising industrial prices had any relation with the overall rising prices in the country. He discovered a positive relationship between both and concluded that, in fact, rising industrial prices have resulted in an increase in the overall price. He went on to say that these prices may be used to accurately forecast inflation in India's industrial sector. In a vector autoregression framework, Roy and Darbha (2000) investigated the link between money, output, and price using quarterly data from Q1 of 1970 to Q4 of 1990. They claim that as agriculture and raw material prices account for such a large portion of the total price level, a rise in the cost of these commodities can raise the entire price level. However, according to Patnaik (2010), who researched the causes of rising prices in India from 1991Q2 to 2008Q2, the supply side factors, particularly imported inflation, have only a minor influence on inflation. However, he claimed that excess demand is one of the major factors affecting inflation in India.

In India, multiple studies have been conducted to understand the interplay between monetary factors and inflation in the country. In both the short and long run, Roy and Darbha (2000) concur with the traditional notion that monetary variables have a major role in shaping prices. He argued that monetary variables such as the money supply are positively associated with inflation. Ashra et al. (2004) investigated a two-way relationship between money and prices in India and concluded that in India, money is neither neutral nor exogenous. Kishor (2012) explored the effectiveness of the real money gap in forecasting future inflation in India, concluding that the real money gap may be used to predict future inflation in India with great success. For the period 1953 to 2008, Bhaduri et al. (2013) studied the relationship between excess money growth and WPI and discovered that an increasing supply of money doesn't directly impact the price levels in India. They went on to say that if credit expansion isn't substantial, excess money growth won't have a big influence on inflation. Using a quarterly dataset from 1982 to 1998, Callen and Chang (1998) examined various determinants to understand the future inflationary trend. They, too, believe that monetary aggregates are crucial in determining inflation and that they can be used to forecast future inflation.

Apart from these studies, various attempts have been made to see if India has a Phillips curve relationship. The Phillips curve is mostly examined to figure out how the output gap affects inflation. The findings of the studies on the Phillip curve have been inconsistent, although most of the Phillip curve investigations in India have determined that the changes in employment levels or the output gap don't necessarily affect inflation in India. Dholakia (1990) used data from 1950 to 1985 to estimate the Phillips curve in India. He concluded that rising employment levels won't affect prices. He argued that developing and under-developed countries usually have a lot of idle resources, and therefore an increase in growth or the gross domestic product need not necessarily put any inflationary pressure on these countries. Bhala (1981) agrees with this viewpoint, claiming that in India, the production gap is not among the principal drivers of inflation in the country. Rangarajan (1983) used data from 1961 to 1977 to

explore the relationship between price changes and output in India's industrial sector, particularly the manufacturing sector. He discovered a negative link between a price change and a change in output. Balakrishnan (1991) used data from 1950 to 1980 to investigate the price-cost relationship in the industrial sector and discovered that output or total activity had an insignificant role in influencing industrial prices as the output coefficient was frequently negative. Nachane and Lakshmi (2002) used a P-Star model to investigate several inflation indicators in the country using both quarterly and annual data from 1955 to 1995. They concluded that in India, inflation and the production gap are negatively connected. Brahmananda et al. (2002) also claimed that for developing countries like India, growth is usually associated with a reduction in the overall price level. Virmani (2004) studied how the production gap impacts price levels in India and concluded that inflation and the production gap are inversely proportional. Srinivasan et al. (2006) used data from 1995 to 2005 to investigate the augmented Phillips curve. They discovered that the output gap's coefficient was negative and significant.

However, a few researchers in India have discovered evidence of the Phillips curve. Kapur et al. (2000) calculated the sacrifice ratio using annual data and concluded that inflation and output have a trade-off, with output having to be cut to reduce inflationary pressure, at least in the short run. Taking industrial output as a proxy of the total economic activity and arranging the data by crop year, Paul (2009) found that a surge in the production gap in India tends to push the prices higher. He went on to say that numerous supply-side factors, such as droughts and policy shocks owing to liberalization, are the key causes for the Phillip curve's absence in India. Dua and Gaur (2009) analyzed the backward-looking and forward-looking Phillips curves for eight Asian nations, including India, using quarterly data from 1996 to 2005. They discovered that the production gap is positively associated with the price levels in India, confirming the presence of the Phillips curve for the country. Patra and Ray (2010) investigated India's expected inflation dynamics and discovered that in India, inflation and output gap are positively related to each other. They went on to say that the output gap accounted for at least 14 percent of India's predicted inflation. Singh et al. (2011) looked at whether the Phillips curve existed in India from 1997 to 2009. They concluded that the Phillip curve relationship existed only from Q2 of 2004 to Q4 of 2009. Mazumder (2011) used quarterly data from 1970 to 2008 to examine the Philips curve relationship in India and concluded that there is evidence for the Phillips curve in India.

Other research, such as Bhattacharya (1997) and Paul (1999), indicates that the Phillips curve did not appear until after the 1991 reforms.

It is important to note that most attempts made to analyze inflation and its determinants in India mainly focus on the Phillips curve and its connection. Only a few studies examine various causes of inflation in India using econometrics approaches such as the ARDL test bound approach and Granger causality test on time series data.

As a result, the current study's goal is to add to the current literature in the following manner:

- This study uses econometric methods to understand the influence of various factors on price levels in India.
- By incorporating the most recent available data, the goal is to better understand the interplay between inflation and its determinants in India.

2. EMPIRICAL ANALYSIS

According to a thorough study of the literature, the probable causes of inflation can be divided into three categories: demand-side variables, supply-side variables, and expectations. As a result, the variables evaluated in this study include oil and food inflation, which measure the supply-side impact, the output gap, which measures the demand side impact, and expected inflation.

This study also incorporates monetary components of inflation, such as the interest rate and currency in circulation, as well as an external driver of inflation, the currency rate. Further information about the variables and then a priori sign is provided in Table 1.

Table 1: Potential Determinants of Inflation

Determinants		***Expected sign***
Supply side factor	Food Inflation	Positive (+)
	Oil Inflation	Positive (+)
Demand side factors	Output Gap	Positive (+)
Expectations	Expected Inflation	Positive (+)
External factor	Exchange Rate	Positive (+)
Monetary factors	Money Supply	Positive (+)
	Interest Rate	Negative (-)

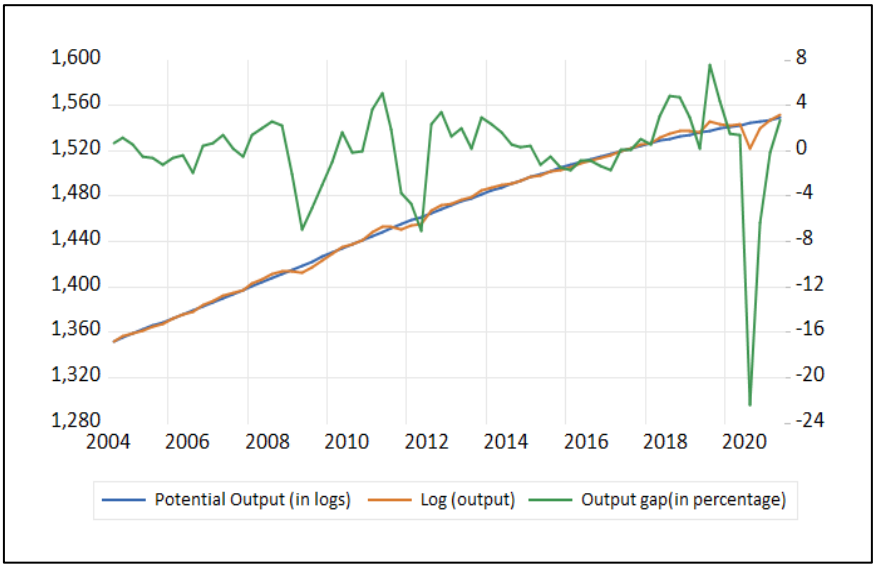
2.1. Data

Quarterly data for the period starting from Q2 of 2006 to Q3 of 2020 is used to probe the principal drivers of inflation in India. The percentage change in the Consumer Price Index for Industrial Workers (base = 2001) has been employed as an inflation indicator for the analysis. After all, it is the proper indicator of general inflation because it is used to establish the dearness allowance of employees in both the public and private sectors.

We don't have quarterly data on aggregate unemployment for India. However, the RBI's website has quarterly data on gross domestic product. As a result, we employ the output gap to examine the demand side of inflation. Since Q2 2006, we have used quarterly data on the gross domestic product (at market prices) in our empirical research. Using a widely established splicing process, we splice the 2004-05 base-year GDP series with the 2011-2012 base-year GDP data to generate a single series from 2006Q2 to 2020Q3. For calculating the potential output, the Hodrick-Prescott filter is used in this study. A smoothing parameter of 1600 has been used in the filter to separate the trend from the cyclical components. The Hodrick-Prescott filter has been widely used to calculate the potential output as it provides an accurate series for y^* and is better than other approaches (Ball et al, 2016). We use the STL decomposition approach to seasonally modify the output series before obtaining the logarithm. STL decomposition has several advantages over other seasonal approaches, including the ability to work with data of any frequency and compatibility with missing values. Due to enormous seasonal variations in India's output, this adjustment is critical.

Figure 2 displays the calculated levels of the actual output (y_t), potential output (y^*) and the output gap (y_t- y^*). Short-run changes in output or unemployment are captured by the expression ($y_t - y^*$). The theory underlying the production gap is that as production increases and surpasses the normal level of production of a firm, the marginal cost of the firm increases, which makes them increase the price further to cover the extra cost.

Figure 2: Output Gap



Source: *Authors Calculation*

Ball et al. (2016) showed that majority of the inflationary supply shock in India originates from the fuel and food industries. It was observed that Primary Article: Food contributes at least 27.83% of the price change in India while fuel prices contribute approximately 23.50%. Therefore, it is essential to analyze the impact of these two supply-side variables on inflation in India. Expectations also play a very important role in influencing inflation. Therefore, in this study, we have used the ARIMA model to determine expected inflation.

Table 2: Variables and their Sources

Variable	***Definition***	***Source***
CPI Inflation	Q-O-Q inflation using CPI-IW inflation (2001=100)	www.rbi.org.in
Food Inflation	Q-O-Q food inflation	www.rbi.org.in
Expected Inflation	It is computed by ARIMA forecast of CPI-IW.	www.rbi.org.in
Output Gap (y_t- y^*)	The explanatory variables include the output gap measured using the GDP series (2011-12=100). We have used the Hodrick-Prescott filter to compute the output gap.	https://www.rbi.org.in /
Oil Inflation	Q-O-Q inflation using the indices of global crude oil prices	Primary Commodity Database, International Financial Statistics
Money Supply	Q-O-Q Money supply	www.rbi.org.in
Exchange Rate	Re/US Dollar spot exchange rate	www.rbi.org.in
Interest Rate	Treasury bill rate (15-91 days)	www.rbi.org.in

Several studies (Libert, 1983; Hill and Fildes, 1984; Libert, 1983; Poulos, Kvanli, and Pavur, 1987) show that the ARIMA modelling technique outperforms other techniques in forecasting. In addition, to understand the influence of monetary factors on price levels, quarterly data for interest rates and the rate of increase in money supply have been used. Our interest rate of choice is the Treasury bill rate (15–91 days), which serves as a reference rate and is highly steady when compared to other interest rate measurements. They are quite safe, transferable, and marketable. Table 2 provides further information about the data's sources.

2.2. Estimated Model

Based on the above discussion the estimated model for inflation can be represented as follows:

$$\pi^{CPI} = f(\pi^e, y - y^*, Oil_{inf}, \pi^{food}, \Delta M, i, e)$$

where,

π^{CPI} = CPI-IW Inflation

π^e = Expected Inflation

$y - y*$ = Output Gap

Oil^{Inf} = Oil Inflation

π^{food} = Food Inflation

ΔM = Rate of Growth of Money Supply

e = US-INR Spot Exchange Rate

i = 15-91 days T-Bill Interest Rate

3. METHODOLOGY AND RESULTS

This paper's empirical analysis is based on quarterly time series data from Q2 of 2006 to Q3 of 2020. It's worth noting that most of the variables used in time series macroeconomics analysis are non-stationary. As a result, it is critical to determine the order of their integration I(0) or I(1) before starting the application.

3.1. Unit Root Test

For the data to be stationary, it is important for the statistical values (mean and variance) of a time series to remain consistent throughout time. Moreover, the covariance between two intervals must be based on the time interval between the periods, and not on the moment at which the covariance is estimated. The process is nonstationary if one or both requirements are not met. In other words, the statistical properties of the data generating process of the series should not change over time for the series to be predictable and to set up a stable and meaningful model. As can be observed from Fig III, the variables under this study may not be stationary. Therefore, we need to test the stationarity of the variable.

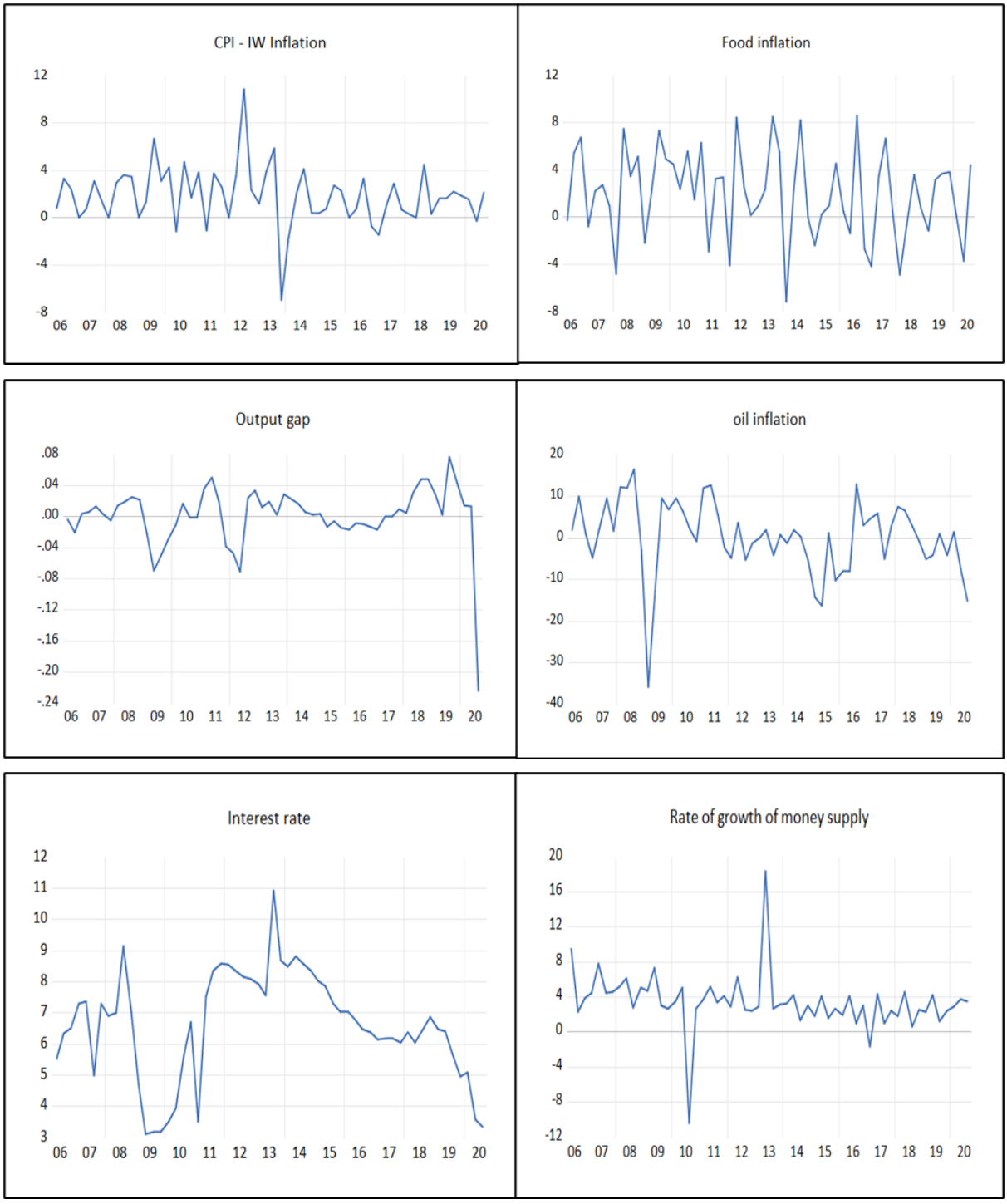
To determine whether the data is stationary or not, the Phillips-Perron test (1988) has been employed in this analysis, and its results are depicted in Table 3.

Table 3: Unit Root Test Results

Variable	*Augmented Dickey-Fuller (ADF) test*		*Phillips-Perron (PP) test*	
	Level	*1st Difference (Δ)*	*Level*	*1st Difference (Δ)*
CPI Inflation	-3.523**	-11.330*	-8.036*	-26.151*
Food Inflation	-4.684*	-3.450***	-21.392*	-28.375*
Expected Inflation	-	-	-22.964*	-24.891
Output Gap	-3.391***	-3.030	-2.152	-4.677*
Oil Inflation	-5.350*	-5.224*	-4.273*	-17.315*
Money Supply	-3.332***	-2.481	-8.264*	-40.333*
Exchange Rate	-2.966	-4.896*	-3.088	-7.196*
Interest Rate	-0.507	-3.565**	-2.463	-9.506*

Note: Statistical significance is indicated by asterisks (*), (**), and (***) at the 1%, 5%, and 10% levels, respectively.

Figure 3: Variables Behavior Over Time



3.2. Cointegration test

The stationarity test findings concluded that the variables investigated in this analysis are not integrated in the same order. To study the long-term relationship between the variables, several strategies have been developed, including the Engle-Granger approach, the Johansen and Julius cointegration technique, and the Autoregressive Distributed Lag (ARDL) cointegration methodology.

However, techniques like Engle-Granger and Johansen can only be used when all the variables are stationary at the same order, which is not true for our analysis, whereas the ARDL technique can be used regardless of the order in which the variables are integrated. Consequently, we have adopted the ARDL test for our analysis to inspect cointegration between CPI-IW inflation and other variables. The Akaike's information criteria have been used to determine the best lag length (p) for estimating the ARDL model (Figure 4).

The estimated values of F and W-statistic are greater than the upper bound critical value, as shown in the ARDL test bound test results in Table 4. Therefore, we can rule out the null hypothesis and infer that a long-run association exist among the variables.

Figure 4: ARDL Lag Length Selection

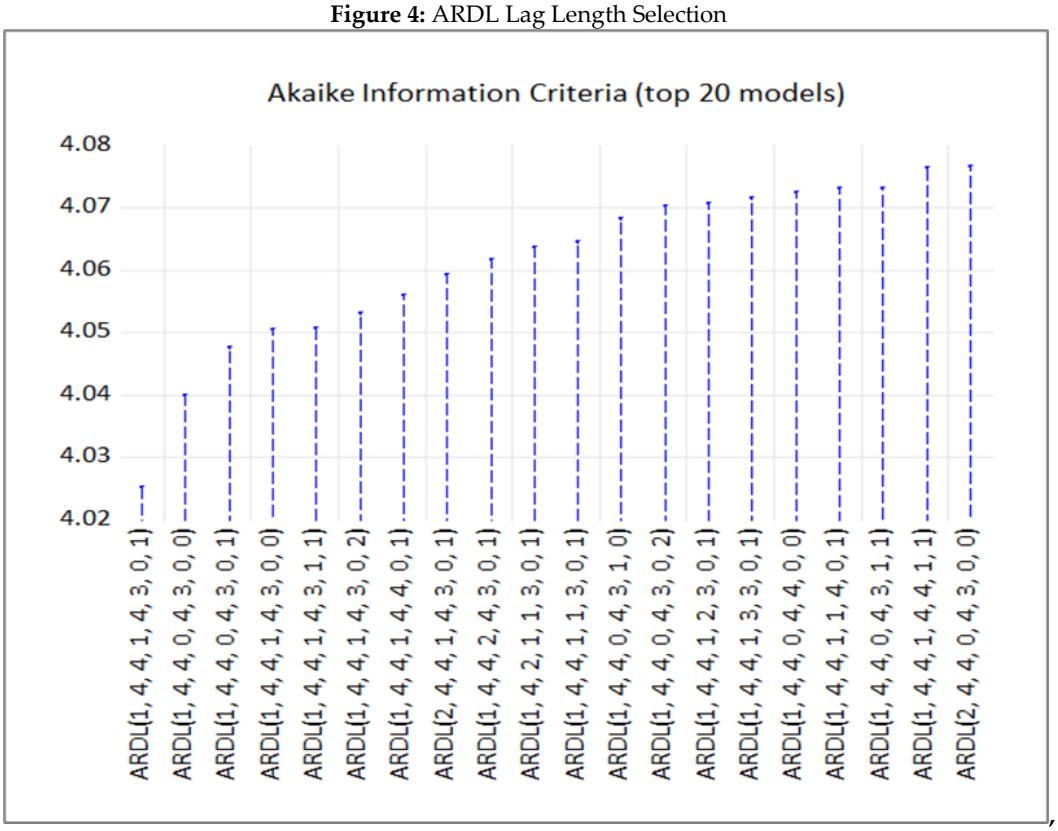


Table 4: ARDL Cointegration Bounds Test Result

Dependent Variable	*Bound Test Statistic*	*Estimated Value*	*Result*
CPI Inflation	F-statistic	5.258*	Cointegrated
	W-statistic	15.75*	Cointegrated
Note: The ARDL (1, 4, 4, 1, 4, 3, 0, 1) model is based on Akaike's information criteria. Critical Values for Bound test F statistic at 5% and 10% levels are (1.97-3.18) and (1.7-2.83) respectively. Similarly, Critical Values for the Bound test W statistic at 5% and 10% levels are (5.91-9.54) and (5.1-8.49) respectively. ARDL test results are reported with no trends and no intercept.			

The estimated coefficients of all the long-run variables are shown in Table 5.

Table 5: Estimated Long-Run Coefficient

Dependent variable	*Independent variable*	*Coefficient*
CPI-IW inflation	Exchange rate	-0.076425*
	Expected inflation	7.023574*
	Food inflation	0.067267
	Interest rate	-0.050257
	Money Supply	-0.323328
	Oil inflation	-0.049416
	Output gap	-6.424706
Notes: At the ten percent level, an asterisk (*) denotes statistically significant. The results for no trend and no intercept are provided. The results are reported based on the ARDL (1, 4, 4, 1, 4, 3, 0, 1) model with no constant and no trend, selected based on Akaike's information criterion.		

As can be seen from Table 5, there is evidence the exchange rate and expected inflation influence CPI-IW inflation. We observe that exchange rate fluctuations are negatively associated with inflation in the economy. This result is in line with several other studies, such as Goyal (2014) and Yanamandra (2015).

The indirect relationship between the rate at which currency can be exchanged and inflation is supported by the pricing to market argument. According to the theory of pricing-to-market, exporters usually charge a competitive price for their foreign currency exports in the overseas market. This allows the profit margins of the exporters to fluctuate in response to fluctuations in the exchange rate. In other words, exporters may feel forced to price-to-market to absorb part of the potential INR price shift in their shipments to India if the INR depreciates significantly.

Thus, increased exchange rate volatility may cause exporters to be more suspicious of price changes and more willing to modify profit margins, lowering pass-through. Furthermore, in a densely populated country like India, the inflationary effect of currency depreciation on domestic prices is offset by price declines owing to decreasing worldwide demand. (McCarthy, 2007). Expected inflation and inflation have a positive relationship, as well. The sign is consistent with economic theory, which states that an increase in expected inflation in the economy has a positive impact on actual inflation (Dua, 2021). However, the coefficients for variables such as food inflation, interest rates, money supply, oil inflation, and the output gap are not statistically significant.

3.3. Granger causality test

The Granger causality test is used to test reverse causality between the dependent and independent variables. As independent variables such as output gap, interest rate and exchange rate are I(1) that is they are integrated at first order. Therefore, we first take the first difference of these variables. Appropriate lag length for the granger causality is selected on the basis of the Schwarz information criterion (Table 6).

Table 6: Optimal lag length for granger causality test

Lag	*LogL*	*LR*	*FPE*	*AIC*	*SIC*	*HQ*
0	-756.77	-	276.36	28.32	28.62	28.44
1	-677.45	132.19	160.72	27.76	30.41	28.78
2	1109.27	2448.47*	3.65e-26*	-36.04*	-31.03*	-34.11*
3	1021.28	-94.51	0.00	-30.42	-23.05	-27.58
Note: * indicates lag order selected by criterion. Appropriate lag length is selected based on Schwarz information (SIC) test						

The granger causality test's results are shown in Table 7. The finding reveals a unidirectional causality from food inflation to CPI inflation, expected inflation to CPI inflation and money supply to CPI inflation. In other words, the analysis suggests that food inflation, expected inflation and money supply influence CPI inflation but not vice versa.

Table 7: Granger Causality Test

Null hypothesis	*F-statistic*	*Result*
FOOD_INFLATION does not Cause CPI_INFLATION	**2.64049***	**Reject the null hypothesis**
CPI_INFLATION does not Cause FOOD_INFLATION	1.76631	Fail to reject the null hypothesis
EXPECTED_INFLATION does not Cause CPI_INFLATION	**7.37566***	**Reject the null hypothesis**
CPI_INFLATION does not Cause EXPECTED_INFLATION	0.02013	Fail to reject the null hypothesis
D(OUTPUTGAP) does not Cause CPI_INFLATION	0.23876	Fail to reject the null hypothesis
CPI_INFLATION does not Cause D(OUTPUTGAP)	0.94517	Fail to reject the null hypothesis
OIL_INFLATION does not Cause CPI_INFLATION	1.39912	Fail to reject the null hypothesis
CPI_INFLATION does not Cause OIL_INFLATION	0.22817	Fail to reject the null hypothesis
MONEY_SUPPLY does not Cause CPI_INFLATION	**8.62071***	**Reject the null hypothesis**
CPI_INFLATION does not Cause MONEY_SUPPLY	0.01459	Fail to reject the null hypothesis
D(INTEREST_RATE) does not Cause CPI_INFLATION	0.28835	Fail to reject the null hypothesis
CPI_INFLATION does not Cause D(INTEREST_RATE)	0.81912	Fail to reject the null hypothesis
D(EXCHANGE_RATE) does not Cause CPI_INFLATION	2.00380	Fail to reject the null hypothesis
CPI_INFLATION does not Cause D(EXCHANGE_RATE)	0.46179	Fail to reject the null hypothesis
Note: statistically significant at 10% level is denoted by (*). The ideal lag length for the test is 2.		

4. CONCLUSION

The present study aims to determine the various drivers of inflation in the Indian context. This study uses econometrics time series techniques such as unit root tests and ARDL bounds tests for the analysis.

The empirical results show that food inflation, expected inflation, and money supply positively influence CPI-IW inflation in India. These results can have some very important policy implications. In developing countries, keeping food inflation should be one of the important goals of the policymakers as a lot of people in under-developed and developing countries remain impoverished, and any increase in food costs disproportionately affects them. Furthermore, it has also been argued that changes in food prices explain a large share of the changes in inflation – about 27.83% (Ball et al, 2016). Therefore, to control the rise in prices and maintain stability in prices, policymakers must aim to keep food inflation under control.

Similarly, increased demand because of an increased supply of money in an economy can also exert inflationary pressure in an economy. Furthermore, Basu (2011) argued that quantitative

easing undertaken by industrialized nations such US instead of increasing demand in the domestic country flows into emerging economies like India and increases the money supply, thereby fueling the inflationary pressure. Therefore, attempts must be made to keep the money supply in control. We also found that expected inflation also positively influences the actual inflation rate. Expected inflation feeds into the actual inflation rate through two channels – aggregate demand and supply shifts. On the aggregate demand side, expected inflation influences household expenditure. High expected inflation in the next period incentivizes more purchases in the current period. This increases aggregate demand in the current period and increases inflationary pressure in the economy. From the supply side, wage bargaining results in an increase in the price of labor. The higher anticipated wages make the workers demand higher wages. This phenomenon results in a price-wage spiral and increases the overall price of goods and services. Therefore, it is essential for policymakers to effectively use monetary policy and achieve their monetary policy target. The rationale is that if everybody expects the inflation rate to be around a fixed value pre-decided by the monetary policy, then a temporary change in inflation will not have any major impact on expectations. Adopting an inflation-targeting policy with a focus on reducing food inflation and surplus money supply could be a good way to keep inflation under control in India.

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