

# **Comparative Longitudinal Analysis on Global Inflation with a special emphasis on Indian Economy**

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## **Abstract**

The economic fluctuations in Indian housing markets have been time and again proved to be led by inflation (Granger Cause) (Richa Pandey & V. Mary Jessica, 2020).

The purpose of this study is to perform a comparative longitudinal analysis on Global Inflation with a special emphasis on Indian Economy.

The study aims to observe the positive cause-effect relationship between the rise of money supply and circulation in the economy and the succeeding rise in housing prices.

**Keywords: Finance, Housing, Real Estate, Macroeconomics, Economics, Inflation, Financial Analysis,**

## Introduction

As Gregory Wolfe theorised, *“The inflation of our time is intimately connected with some of its most obdurate ideas, forces, postulates, and institutions and can be overcome only by influencing these profound causes and conditions. It is not just a disorder of the monetary system which can be left to financial experts to redress, it is a moral disease, a disorder of society. This inflation, too, belongs to the things which can be understood and remedied only in the area beyond supply and demand.”*

Friedman’s permanent income hypothesis suggests that people would change their desired consumption if changes in housing prices affect their *expected lifetime wealth*. Moreover, an inflationary housing market can be termed essentially, as one of the most major contributors to a nation’s overall inflation (Jared Bernstein, Ernie Tedeschi, and Sarah Robinson, 2021).

A comparative longitudinal analysis on inflation can provide significant insights into the evolution of prices over time. By comparing inflation rates across different countries, researchers can identify patterns and commonalities that can help explain the underlying causes of inflation.

Additionally, by looking at inflation over a long period of time, this research can help economists, administrators and businesses in identifying periods of high and low inflation to investigate the factors that may have contributed to these changes. In general, inflation is defined as a sustained increase in the price level of goods and services in an economy. Over time, inflation can erode the purchasing power of a currency, as prices for goods and services rise faster than the currency’s value. There are a variety of factors that can contribute to inflation, including increases in the cost of production, changes in monetary policy, and demand-side pressures.

## **Objective**

The objective of this research is three pronged:

- To perform a comparative analysis on global inflationary tendencies.
- To perform a longitudinal analysis on the Indian economy.
- To thoroughly analyse the inflationary nature of the Indian Economy.

## **Research Methodology**

Research is not just the process of gathering information, it's the process of answering unanswered questions or creating new ones. (Goddard, 2001)

As mentioned earlier, this research fundamentally focuses on global inflation with a special emphasis on the Indian Economy.

Research Data used in this study is secondary in nature and is mainly of 3 types.

- **Simulation Data**  
This would be collected from case studies and simulated environments.
- **Derived Data**  
This would be data derived from historical trends and financial charts.
- **Observational Data**  
This would be data gathered on a first hand account resulting from personal observation.

Quantitative data analysis would be used in analysing the collected data using both descriptive and inferential analysis.

## Analysis

**Table 1.1. *Types of inflation***

The term inflation originates from the Latin term *inflare* (to blow up).

Inflation is an observable and an incompletely anticipated

Classification	Criterion for classification
a. Open or suppressed inflation	Working of the market mechanism
b. Creeping, moderate, or galloping inflation, hyperinflation	Rate at which prices increase
c. Anticipated and unanticipated inflation	Expectations of inflation
d. Cost-push or demand-pull inflation	Causes of inflation

phenomenon, which is simply defined as the general rise of price levels in an economy. It is essential for this research to consider the numerous definitions given by various economists and philosophers over the time to contextualise inflation.

- "...Steady and sustained increase in the general price level". (**Friedman**)
- "The word inflation in the broadest possible sense refers to any increase in the general price-level which is sustained and non-seasonal in character." (**Peterson**)
- "By inflation we mean a time of generally rising prices" (**Samuelson**)
- "Inflation is simply a persistent and appreciable rise in general price-level." (**Shapiro**)
- "Inflation is too much money and deposit currency, that is too, currency in relation to the physical volume of business being done." (**Kemmerer**)
- "Inflation is an increase in the quantity of purchasing power." (**Gregory**)
- "Inflation is an increase in the quantity of money faster than real national output is expanding." (**Johnson**)
- "Inflation is the stage of too much money chasing too few goods: In short, Inflation is the process of persistent increase in the price level. (**Coulbourn**)

- Inflation is a rise in price levels with additional characteristics or conditions: It is incompletely anticipated; it leads (via cost increases) to further rises; it does not increase employment and real output; it is faster than some “safe” rate; it arises “from the side of money”; it is measured by prices net of indirect taxes and subsidies; and/or it is irreversible. **(Bronfenbrenner and Holzmann, 1963, p. 599)**

### **Keynesian view on inflation:**

Keynesian Economics largely believes in adjusting government spending to adjust demand and control inflation. Keynes, himself was neither an inflationist nor a monetarist, JA Hayek said that if Keynes would have been alive today, he would have been the greatest fighters against inflation.

Keynes described inflation on the basis of employment, furthermore he introduced a schism in his theory:

(1) Semi-Inflation: Increase in the quantity of money before full employment leads to increase in output and employment. Consequently, prices do not increase in the same proportion as the quantity of money. This inflation is termed as Semi Inflation, moreover, such inflation is mainly due to hindrances in the mobility of factors of production. This is also called Bottleneck Inflation.

(2) Open or Full Inflation: Increase in the quantity of money after full employment leads to rise in the price-levels which is called open, full, true or absolute inflation by Keynes. It occurs because, the apparent increase in the effective demand leads to no possibility of increase in the production of goods, as all factors of production are fully employed. In the

words of Dillard, "There is a true inflation when effective demand for consumer goods plus the effective demand for investment goods exceeds the total value of output at full employment in terms of existing prices."

"Keynes argues that inflation is "a method of taxation" which the government uses to "secure the command over real resources, resources just as real as those obtained by [ordinary] taxation" [7; p. 37]. "What is raised by printing notes," he writes, "is just as much taken from the public as is a beer duty or an income tax" [7; p. 52]. Regarding the inflation tax he says that "a government can live by this means when it can live by no other. It is the form of taxation which the public find hardest to evade and even the weakest government can enforce, when it can't enforce nothing else" [7; p. 37]. In discussing the inflation tax, Keynes stresses that it is a tax on cash balances. The burden of the tax, he says, falls on cashholders, i.e., on the holders of the original . . . notes, whose notes [after inflation] are worth . . . less than they were before. The inflation has amounted to a tax . . . on all holders of notes in proportion to their holdings. The burden of the tax is well spread, cannot be evaded, costs nothing to collect, and falls, in a rough sort of way, in proportion to the wealth of the victim. No wonder its superficial advantages have attracted Ministers of Finance [7; p. 39]."

**(Thomas M. Humphrey, Federal Bank of Richmond, 1981)**

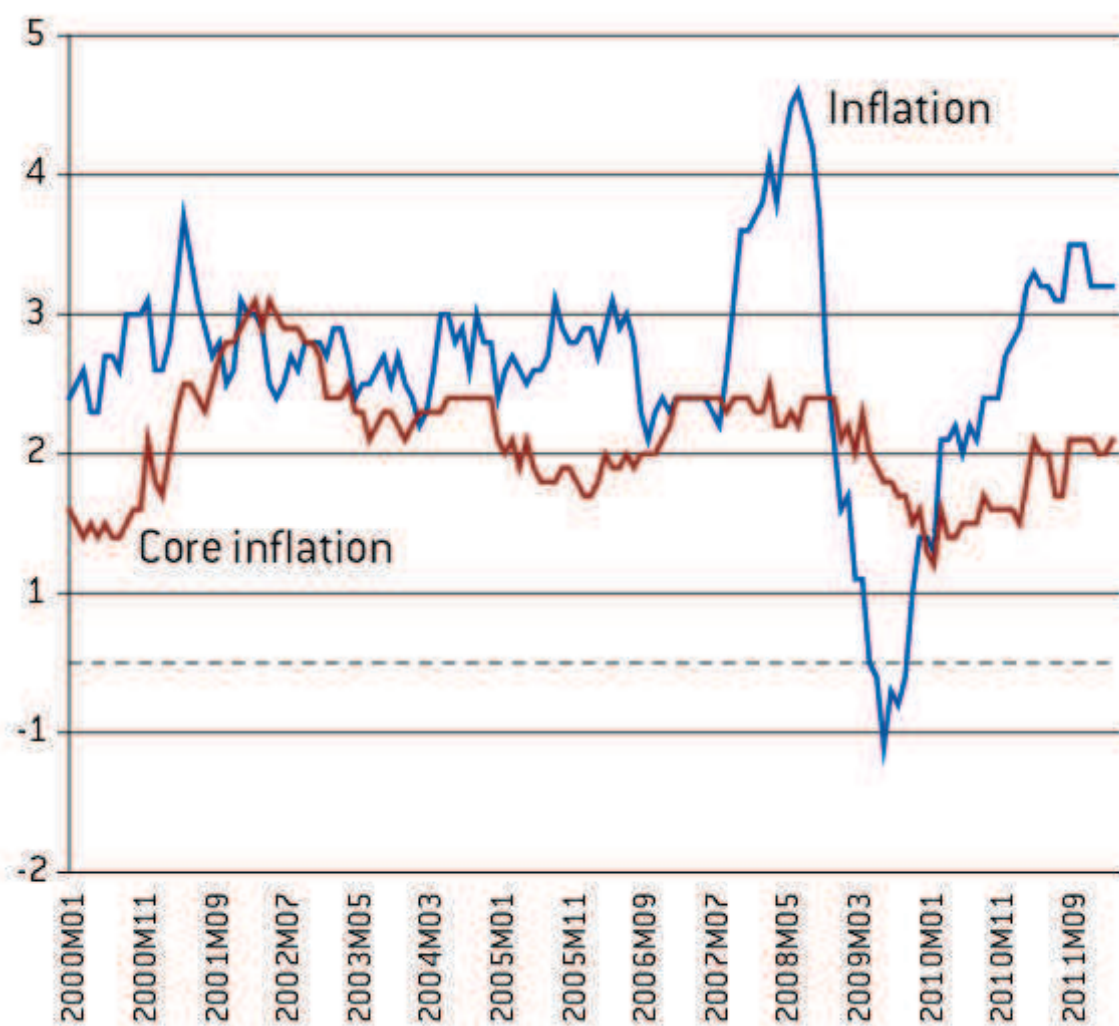
### **Monetarist View on Inflation:**

"Monetarists hold that inflation is a purely monetary phenomenon that can only be produced by expanding the money supply at a faster rate than the growth of capacity output. Thus at any given time the actual rate of inflation is seen as reflecting current and past rates of monetary expansion. Monetarists reject nonmonetary explanations of inflation-i.e., those that attribute rising prices to such alleged causes as shifts in autonomous private expenditures,

government fiscal policies, cost-push influences, food and fuel shortages, etc.-on the grounds that an increased stock of money per unit of output is required in all cases and therefore constitutes the true cause of inflation. In short, the sole necessary and sufficient condition for the generation of inflation is said to be excessive monetary growth.” (Thomas M. Humphrey, Federal Bank of Richmond, 1975)

Professor Milton Friedman, perhaps America’s foremost monetarist, famously said: “Inflation is always and everywhere a monetary phenomenon, in the sense that it is and can be produced only by a more rapid increase in the quantity of money than in output.”





### Core Inflation

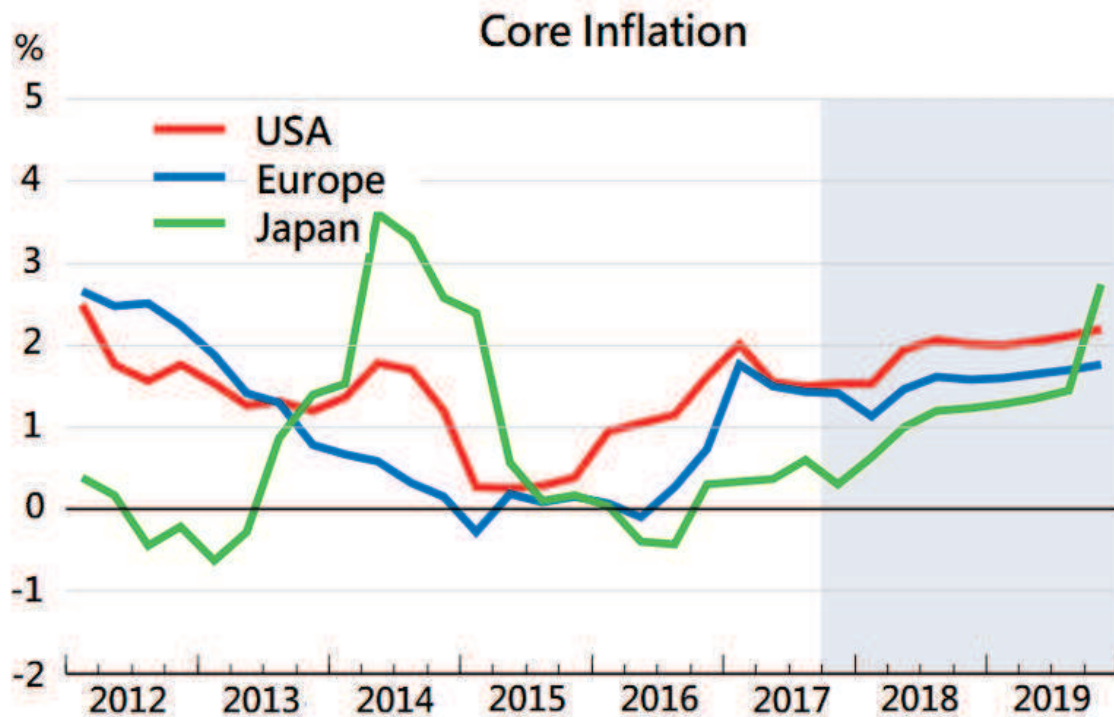
Core inflation is the change in the costs of goods and services in the long run, it represents the long run trend in the price level. Core Inflation excludes transitory price changes.

Scott Roger in his 1998 research reviewed the concept of core inflation in detail. To quote him, “In general, core inflation tends to be defined in terms of the particular method used to construct a practical measure rather than in terms of what the measure is trying to capture.

Nonetheless, virtually all practical efforts to measure core inflation can be seen as trying to quantify one of two broad concepts. One concept views core inflation as the persistent component of measured inflation. The second concept views core inflation as the generalised

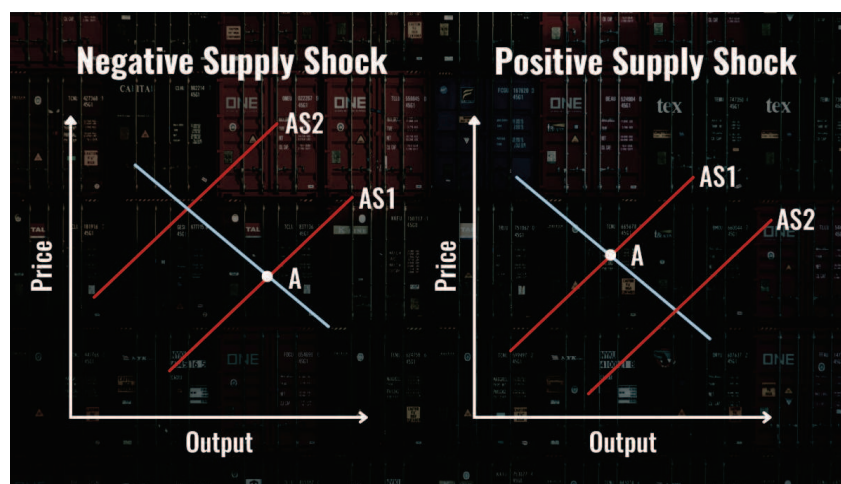


component of measured inflation. In both conceptions, however, core inflation is generally associated with expectations and demand pressure components of measured inflation and excludes supply shocks.” (Scott Roger, 1998)



### Supply Shocks

A supply shock is an event that suddenly increases or decreases the supply of a commodity or service, or of goods and services across-the-board. This unforeseen change affects the equilibrium price of the good or service or the economy's general price position. Supply shocks result in changes in inflation rate and price levels of the economy.



## Deflation

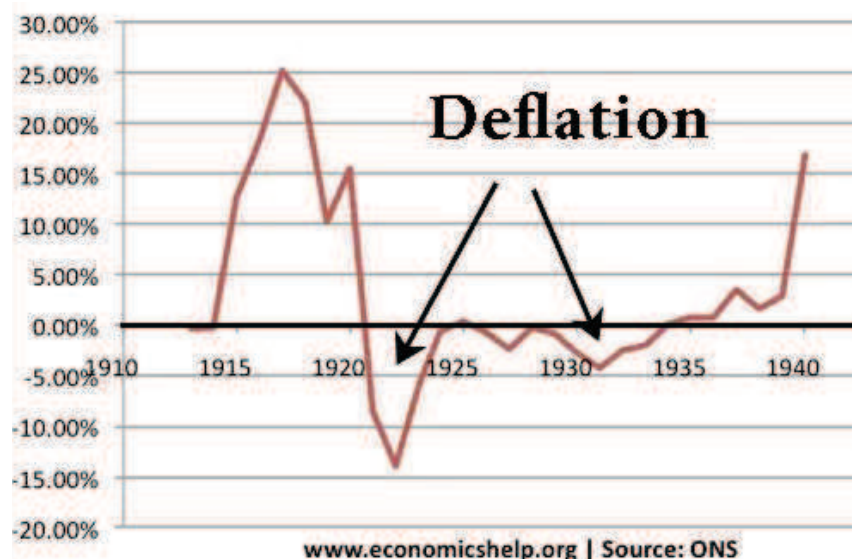
Deflation can be outlined as a situation where prices of essential goods and services decline over time. Deflation usually occurs when supply of goods is faster than the supply of plutocrats or the income of the people.

Still occasionally due to technological enhancement the force of goods is important faster than the demand of goods. For example, the prices of the particular computers sprucely ceased in recent times. Deflation can due to the following four procurators:

- The fall in supply of money,
- The ascent in supply of other goods and services,
- The boost in demand for money,
- The fall in supply of other goods and services.

Like inflation, deflation also has, both positive and negative effects on the economy. There are four basic causes of deflation. They are:

1. Growth Deflation
2. Cash-Building Deflation
3. Bank Credit Deflation
4. Confiscatory Deflation

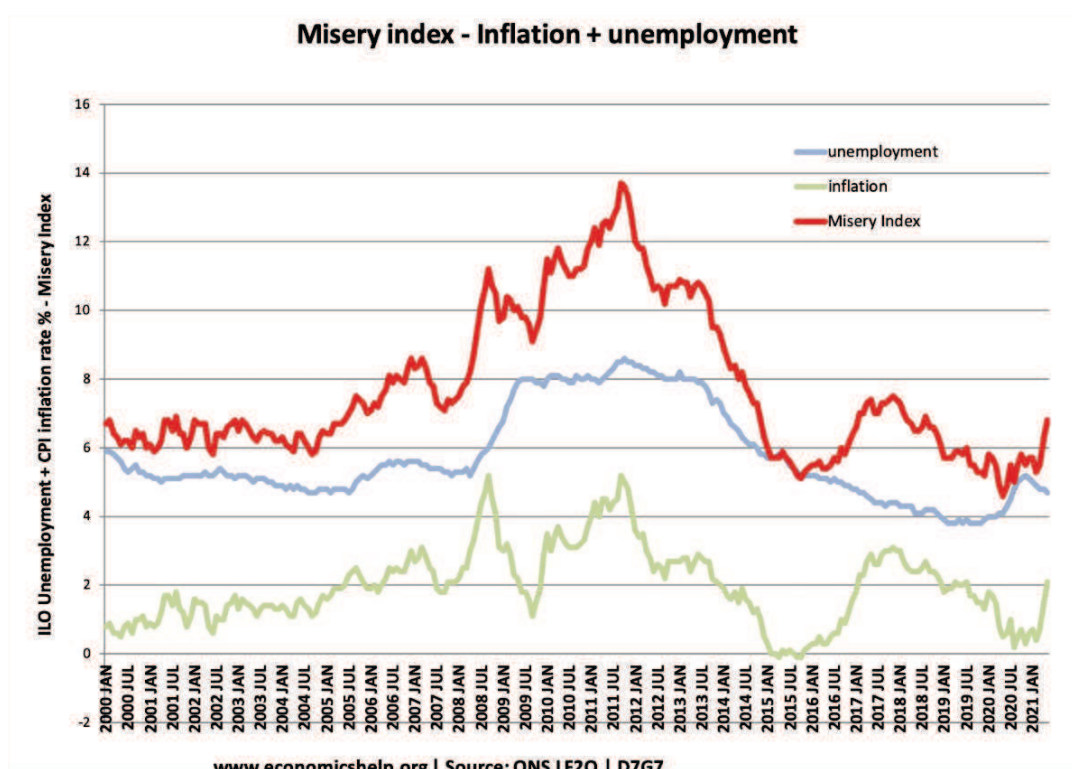


## Stagflation

An economic phenomenon known as stagflation is characterised by significantly weak growth, a high unemployment rate, and concurrent inflation. This confluence is particularly challenging for economic officials to manage because trying to address one of the issues individually will make another worse. It is also called recession inflation.

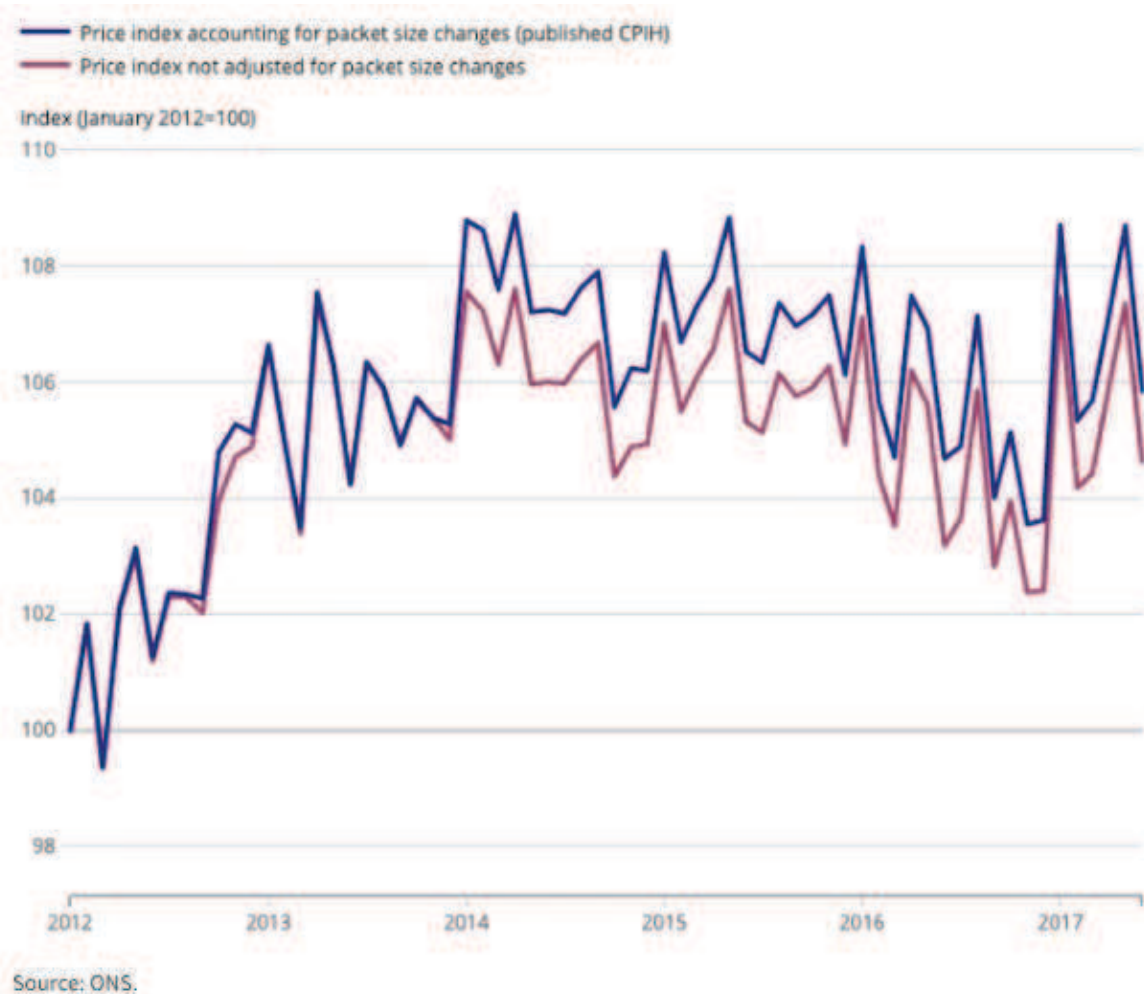
*“Stagflation is a phenomenon of the 1970's. Its existence poses economists with a theoretical problem and policy makers with a practical dilemma. For traditional macroeconomic theory, stagflation means the break-down of the Phillips Curve. And for conventional demand managers it means that fighting inflation might produce more stagnation and fighting stagnation more inflation.”* (Pieter Korteweg, 1979)

A spike in the price of commodities like oil is a common contributor to stagflation. In the 1970s, stagflation set in after the price of oil tripled. Following the increase in oil prices and the commencement of the global recession, there was some stagflation in 2008.



## Shrinkflation

Shrinkflation is the technique of minimising the size of a product while keeping the price the same. Raising the price per unit is a method used by businesses, mostly in the food and beverage sectors, to increase or sustain profit margins in the face of increased input prices. In business and academic research, shrinkflation is also known as package downsizing.

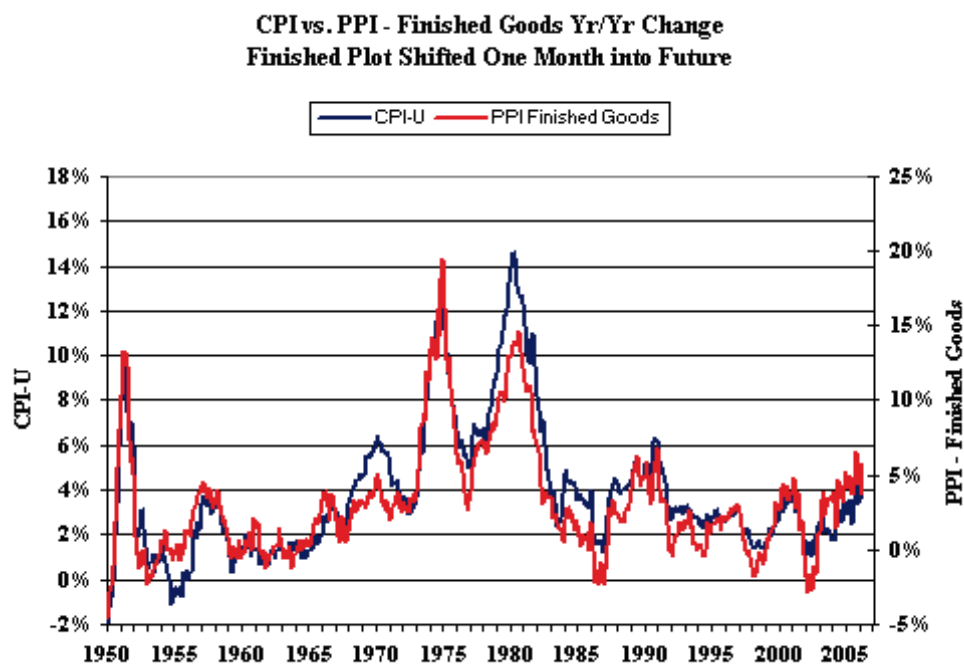


## Measures of inflation:

Though economists choose a number of products and create a price index to assess inflation, there is no one accurate way to do so since the value of inflation depends on how much weight economists give to each good in the index.

Examples of common inflation measures include:

- Consumer Price Indexes (CPIs)
- Product Price Indexes (PPIs)
- Wholesale Price Indexes
- Commodity Price Indexes
- GDP deflator



### **Inflation in Indian Economy**

According to the numerous studies conducted by the Reserve Bank of India over many decades, the Indian economy's inflationary performance is generally regarded as adequately satisfactory among emerging nations.

After analysing numerous RBI reports one could come to the conclusion that inflation has been controlled and has remained at satisfactory levels since the country's independence.

Inflation during the 1950s ranged widely from a negative 12.5 percent to a positive 13.8 percent, with the average decadal rate being a very low 1.7%. The greatest inflation rate in 1956–1957 was mostly ascribed to demand pressures, notably investment demand—both public and private—while the minimum inflation rate—at a negative rate—was in reaction to the bumper agricultural production in 1952–1953.

The average decadal inflation rate increased to 6.4% in the 1960s. Inflationary pressures began to increase in 1962 and 1963 as a result of the Chinese War in 1962 and an inadequate supply situation. The famine in 1965–1966 and the war in Pakistan in 1965 worsened the situation. The year 1966–1967 saw the greatest inflation rate (13.9%), but 1968–1969 saw the lowest inflation rate (-1.1%), which was mostly due to the bumper agricultural production the year before.

At 9.0%, the average inflation rate of the 1970s was still greater. The failure of the kharif harvests in 1972–73 as well as the increase in crude oil prices in 1973 were primarily blamed for the highest inflation ever recorded, which came in the year 1974–75 at 25.2%. In response to the significant anti-inflationary measures implemented by the government, the next year, 1975–1976, saw the lowest inflation rate for the decade at (-) 1.1%. However, the years 1979–1980 saw a sharp rebound of inflationary tendencies, mostly as a result of low agricultural output and the second increase in global oil prices. Regarding the pricing situation, the decade was the most turbulent.

The decadal average inflation rate decreased to 8.0% throughout the 1980s. The fact that there was little price volatility compared to any of the decades before is more important. The

decade's greatest inflation rate was 18.2% in 1980–81, while the lowest inflation rate was 4.4% in 1985–86.

From 1990–1991 to 1997–1998, there was a return of inflationary tendencies, with price increases of between 10% and 15% in four of the seven years. The first half of the decade was marked by double-digit inflation after the Gulf Crisis of 1991, with the only exception being 1993–1994 when it was 8.4%. There was a trend reversal from 1995–1996 to 1997–1998 as reform initiatives started to have a favourable influence on pricing. The average inflation rate over the 1990s up to 1997–1998 was 9.0%. Average Inflation (CPI) was 13.17% in 1998-1999 and 4.84% in 1999-2000.

The first half of 2000's saw a good inflation rate averaging at 4.786% with the extremes at 3.77% (2001, 2004) and 4.31% (2002) with the Gujarat riots and the subsequent global sanctions purported as the blame for the higher figure.

In the second half of 2000's and the first half of 2010's, India again saw a return of highly inflationary tendencies, with high government spendings, scams, major protests and poor governance to be blame, the average inflation rate from 2005 to 2015 was 8.903% which is quantitatively double the previously mentioned figure.

2014 saw the instalment of the BJP led NDA government that implemented a series of radical economic reforms while keeping inflation in check. The second half of 2010's saw a relative decrease in inflation rates, with a 5 year average (2014 to 2019) being 5.162%.

In 2020, the world witnessed a deadly pandemic, affecting the day to day lives of billions of people, pausing professional and financial markets as a whole, despite that India saw a satisfactory inflation rate of 5.58% which was in fact lesser than the previous year.

In 2021, while dealing with the repercussions of the pandemic India saw an inflation of 4.89% followed by an inflation rate of 5.92% (as of October 2022).

The current inflation rate of 5.92% is very ideal for the Indian economy to grow stably. The main factors which are responsible for the stability of the inflation rate are the strong and effective economic policies of the government, the good monsoon this year and the overall improvement in the global economic scenario.

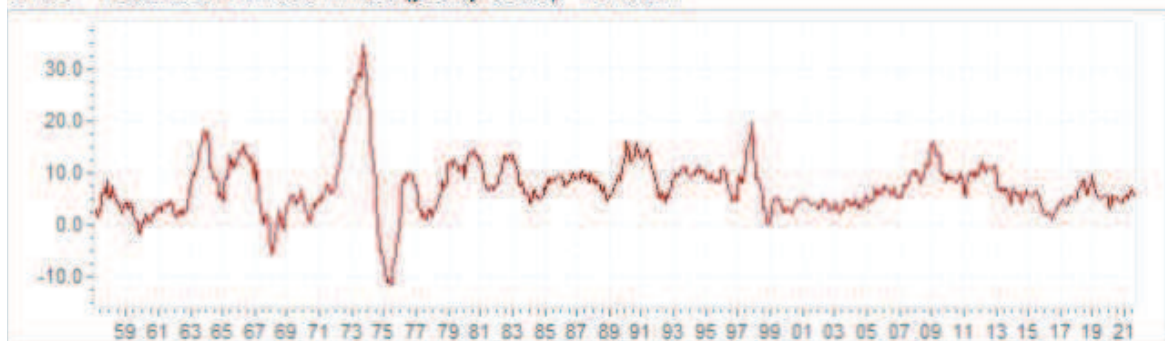
The government has been able to keep the inflation rate under control by taking various steps like reducing the fiscal deficit, implementing demonetization, improving the efficiency of the food supply chain and by providing a good monsoon.

All these steps have helped in reducing the inflation rate and have also helped in boosting the economy. The good monsoon this year has also helped in reducing the inflation rate as it has led to an increase in the production of food grains and other agricultural products. This has helped in keeping the prices of these products under control and has also helped in reducing the overall inflation rate. The overall improvement in the global economic scenario has also played a role in reducing the inflation rate in India.



The fall in the prices of crude oil and other commodities has led to a reduction in the prices of these products in the international market. This has helped in reducing the inflation to an ideal rate.

Chart – historic CPI inflation India (yearly basis) – full term



inflation.eu

## CONCLUSION

This paper studied the inflationary nature of the Global Economy, which is characterised by inflationary pressures. These inflationary pressures arise from a variety of factors, including the expansionary monetary policies of central banks, the increase in global oil prices, and the increase in global food prices.

Inflationary pressures lead to higher prices for goods and services, and they can also lead to higher interest rates. Higher interest rates make it more difficult for borrowers to repay their loans, and they can also lead to higher unemployment. A sustained inflationary increase in the cost of living and the general price level of goods and services in an economy erodes purchasing power, which has a direct impact on living standards.

India's average inflation rate since independence has been around 5.8%. The late 1970s and early 1980s saw a period of high inflation in India. The annual inflation rate in India was

11.4% in 1980. Since then, the inflation rate has been on a declining trend. It stood at 3.4% in 1990 and further declined to 2.9% in 2000. The average inflation rate in India during the period 2001-2010 was 5.3%.

The main factors responsible for inflation in India are: (i) demand-pull inflation, (ii) cost-push inflation, (iii) structural inflation, and (iv) fiscal inflation. Demand-pull inflation is caused by an increase in aggregate demand due to an increase in private consumption expenditure, government expenditure, or investment. Cost-push inflation is caused by an increase in the prices of inputs used in the production process. Structural inflation is caused by imbalances in the economy such as an imbalance between the agricultural and industrial sectors. Fiscal inflation is caused by an expansionary fiscal policy, which leads to an increase in government expenditure.

Inflation in the Indian Economy has been a matter of concern for policy makers as well as businesses and households. After performing a comparative longitudinal study it was found that India has always maintained a satisfactory inflation level, which is among the best in emerging economies. The study concludes that the RBI's monetary policy framework has been successful in anchoring inflation expectations and maintaining inflation at a satisfactory and stable level throughout decades.

The study after analyzing the facts and figures found that inflation and the economy are two sides of the growth coin. Without inflation no economy can move in the proper direction. It is a sign of economic growth. The general perception that excesses of everything is bad makes the difference. It is found that the degree of inflation has its varying impacts. If inflation is

low then it casts a positive impact on common citizens, lenders and the banking industry. If it is high then it adversely impacts economic performance.

- The study found that in the year 2013-14 general index inflation was highest and was (9.6).
- The study found that inflation in other price index at all India basis in all commodities was highest in the year 2010-11 which was (9.6), in the year 2015-16 it was found lowest (-2.5).
- The study found that inflation in other price index at all India basis in primary articles was highest in the year 2010-11 which was (17.7) and lowest in 2015-16 which was (0.3).
- The study found that inflation in other price indices at all India basis in manufacturing products segment was highest in the year 2011-12 which was (7.3) and lowest in 2015-16 which was in minus (-1.1).
- The study found that inflation in other price indices at all India basis in non-food manufactured segments was highest in the year 2011-12 which was (7.3) and lowest in the year 2015-16 which was minus (-1.5).

The study concludes that inflation is having perpetual existence as it is a part of an active economy. Its presence is an indication of economic movement with multiple impacts. Its varying degree has an impact on the economy. If it increases at a high rate then it becomes a disaster for the respective economy. Its existence imposes real costs which nation citizens and associated socio – economic segments have to bear in different forms.

- Government has to adopt protective measures to secure energy security for the country to promote the economy and to maintain low cost of manufacturing.

- Nation policy makers have to ensure the availability of necessary raw material and reliability of power supply is core to optimize the industrial capacity and significant improvement in productivity.
- The government and policy makers must develop and promote self-sufficient economic environment besides moderating inflation. Government must minimise dependency on imports for which domestic capacity exists.
- Government must make comparative management of the current account balance of payment with the rest of the world at a sustainable rate.
- Government must try to keep the fiscal deficit low as it encourages private investment which is useful in maintaining stability in price.
- Government and policy makers to control the inflation in advantage limits have to make effective monetary policy, supply side policies, and exchange rate policies along with Keynesian view – liquidity trap.
- Government in order to tame inflation has to restrict its wasteful spending and expenditures, it has to control tax evasion, it has to promote rapid economic growth, it has to maintain quality in debt.
- Government has to restrict its borrowing which translates into default or hyperinflation. The government must borrow funds only for productive infrastructure which promote GDP growth and generate revenue.
- Lastly, for the betterment of the nation's economic growth and development, the government has to insure low and stable inflation.

### **Scope**

Though this research focused on the Indian Economy in general, its scope is endless as inflation is a never ending phenomenon that will perplex economists and businesses for aeons to come. This research will be beneficial to businesses who are looking to understand inflation and how it affects their day to day operations. Inflation is a very important topic for businesses and economists as it can have a profound effect on the economy. This research can be used by businesses to understand how inflation affects their business and what they can do to mitigate the effects of inflation.

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