An empirical study on the causes and impacts on inflation in India

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Abstract
A growing number in the developing countries are practicing inflation as it is a monetary policy framework. The Central bank of India is trying to implement inflation targeting it to take into account the various experiences from other countries. This study provides the analysis of changes in inflation due to its implementation. This research shows that there is a significant effect on the implemented inflation and variability of growth. It provides the best statistical explanation of inflation dynamics and CPI inflation as an inflation measure. This outcome also shows that the Indian firms follow backward and forward looking behavior. Both the real marginal cost and exchange rate pass-through play an important role in inflation. India is more backward looking in price setting behavior when compared to UK and Australia, although the price rigidity is significantly higher in both countries. At the time of Inflation on average the Indian firms keeps the price unchanged for a certain period of time mostly ranging from 9-10 months and the rest of the Indian firms reset their prices at any given point of time.

Keywords: Causes, effects, measures, Phillips curve, CPI & WPI

Introduction
In Economics, the word Inflation refers to general rise in prices measured against a Standard Level of Purchasing Power. Inflation is defined as a continuous increase in the price level or a fall in the value of money. When the level of currency of a country exceeds the level of production, inflation occurs. Value of money decreases with the occurrence of inflation. Inflation is a rise in the general level of prices of goods and services in an economy over a period of time. Inflation's effect on an economy can be positive or negative. The rate of inflation is measured by the annual percentage change in the level of prices as measured by the consumer price index. The latest economic crisis exposed the inefficiency of stabilization policies on the price level inside the countries, where it altered the stable economic growth. Especially it concerns transition countries, because over the recent years, inflation in these countries has increased so much.

Types of inflation
Open Inflation: The rate at which cost increases due to economic trends of spending.

Suppressed Inflation: Existing inflation disguised by government price controls or other interferences in the economy such as subsidies. Such suppression can only be temporary because no governmental measure can completely control accelerating inflation in the long run. It is also called Repressed Inflation.

Galloping Inflation: A rapid Inflation which is near to impossible to reduce.

Creeping Inflation: It occurs when the inflation of a nation increases progressively, but continuous and throughout. This is the most common pattern in many countries. Although the increase is comparatively small in the short-term it continues over time and hence the effect will become greater and greater.

Hyper Inflation: Hyper Inflation is mainly caused due to excessive deficit spending by government (financed by printing of more money).
Some economists believe that social breakdown leads to Hyper Inflation and that its roots lie in political causes rather than economic.

Causes for inflation
There are several factors that help to determine the inflationary impact in the country and also used for further understanding in making a comparative analysis of the policies. The Phillips Curve Model depicts a relation between the rate of unemployment and Inflation which is the major factor of Inflation.

Factors affecting the Demand Side: It occurs in a situation when the aggregate demand in the economy exceeds the aggregate supply. It could further be described as a situation where too much money chases few goods. Some of the factors affecting the demand side of inflation particularly in India are as follows:
- Increase in money supply
- Increase in disposable income
- Deficit in Financing
- Foreign Exchange Reserves

Factors affecting the Supply Side: The supply side of inflation is a major ingredient for rise in Inflation in India. The agricultural need creates a want resulting in a higher level of inflation. Similarly, the high cost of labour will eventually increase the production cost which in turn will lead to a higher price for that particular commodity. Some of the factors affecting the supply side of inflation in India are as follows:
- Rise in prices
- Erratic agriculture growth
- Agricultural price policy
- Inadequate industrial growth

General Factors: This can be broadly divided into two categories:

a) Quality Theory of Inflation - The quality theory of inflation relies on the expectation of the seller accepting currencies and to be able to exchange those currencies at a later time for goods that are required as a buyer.

b) Quantity Theory of Inflation: The quantity theory of inflation relies on the quantity equation of money that relates the money supply, its velocity, and the nominal value of exchanges.

Domestic Factors: There is a gap in India between output and the money. The supply of currency increases quickly while the supply of goods takes time which causes increased inflation and because of that hoardings has become a problem of major concern in India where onions prices have shot high in the sky.

External Factors: The exchange rate is a key component for the increase in inflationary that rises in India. In the economic point, India affects the domestic markets. Hence, the nominal exchange rate and the import inflation are a measure that portray the competitiveness and challenges of the Indian economy.

Philips Curve Model of Inflation in the Long Run and Short Run

The challenges in developing economy are more, particularly when in context of monetary policy with the Central Bank, the inflation and price stability factor. There was an argument those days when monetary policy which was made to be a major element in showing and controlling Inflation. The Central Bank works on its part to control and have a constant stable price for products. A good environment of price stability happens only when to create and save mobilization and a sustained economic growth. The former Governor of RBI C.Rangarajan tells that there is a long-term trade-off between output and inflation. He also adds on that short-term trade-off which happens only to introduce uncertainty about the price level in the future. There is a contract that the central banks have decided to introduce the target of price stability while an argument supports that should be implemented in practice.

Optimal Inflation Rate: It arises as the base theme in deciding an important monetary policy. There are two discussable areas for an effective inflation, whether the range should be of 1-3 per-cent as the inflation rate that persist in the industrialized economy or should it be in the range of 6-7 per-cent. While deciding on the elaborate inflation rate some problems occur about its measurement. The measurement part has frequently calculated an inflation rate which is more comparative than in nature. Secondly, there arises a problem frequently when the quality improvement in the product is needed to be taken; hence it affects the price index. The consumer favourite for cheaper goods sometimes affects the consumption basket at times, for the increased expenditure on the cheaper goods that takes time for the increased weight and measuring inflation. The Boskin Commission has measured a 1.1 per cent of the increased inflation in USA every-year. The commission tells the developed countries about the complete study on inflation to be fairly low.

Money Supply and Inflation: The Quantitative reduction by the central banks with the effect of increased money supply in an economy helps every time to either increase or balance inflationary targets. There is a puzzle formation between the low-rate of inflation and high growth of money supply. When the current rate of inflation is low, high rate of money supply warrant the holding of converting and an increased interest rate for a moderate aggregate demand and any avoidance of problems. Further, in case of low output a strong monetary policy would affect the production in a
much greater manner. The supply parts have known to play a major role in the regard of monetary policy. The main harvest in 1998-99 with a buffer yield in wheat, sugarcane, and pulses led to an early supply condition further increasing their prices from what were they in the last year. The increased import challenge since 1991 with the trade liberalization in place had widely contributed to the reduced manufacturing competition with a cheaper agricultural raw materials and the fabric industry. These cost-saving driven technologies often helped to drive a low-inflation rate. The normal growth cycles accompany with the international price pressures has several times being characterized by domestic uncertainties.

Global Trade: Inflation in India generally occurs as a result of global traded commodities and the several efforts made by The Reserve Bank of India to weaken rupee against dollar. This was done after the Pokhran Blasts in 1998. This has been regarded as the source cause of Inflation crisis rather than the domestic inflation. According to some experts the policy of RBI is to absorb all dollars coming into the Indian Economy that contributes to the appreciation of the rupee. When the US dollar has shrieked by a margin of 30%, Reserve Bank of India made a massive addition of dollar in the economy that made it highly liquid and further triggered off inflation in non-traded goods. The RBI picture clearly shows for subsidizing exports with a weak dollar-exchange rate. All these tell for a dangerous inflationary policy which are being followed by the central bank of our country. Further, on account of cheap products which are being imported in the country being made on a high technological and capital intensive technique that happens to either increase the price of domestic raw materials in the global market or they are forced to sell it at a cheaper price, hence fetching heavy losses.

Measurements of inflation
There are different ways to measure inflation. On the account of population, inflation is based on certain sets of population indices. Such indices are called Consumer Price Index (CPI), Producer Price Index (PPI) and Wholesale Price Index (WPI) etc. Since the prices of some items are more volatile than others, it might give contradictory signals to policy makers as the entire inflation level could be vulnerable because of selected goods. This gives rise to concepts of Headline inflation and Core inflation whereby. Another variant of core inflation is mean inflation.

Wholesale Price Index
Wholesale Price Index (WPI) is computed by the Office of the Economic Adviser in Ministry of commerce & Industry, Government of India. It was earlier released on weekly basis for Primary Articles and Fuel Group. However, since 2012, this practice has been discontinued. Currently, WPI is released monthly. Salient notes on WPI are as follows: Base Year

Base Year
WPI Base year is 2004-05=100. It’s worth note that the base year for CPI is 2012 currently. This is one reason for increasing difference between CPI and WPI in recent times. Items

<table>
<thead>
<tr>
<th>Total</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Articles</td>
<td>20.12</td>
</tr>
<tr>
<td>Food Articles</td>
<td>14.34</td>
</tr>
<tr>
<td>Non-Food and Minerals</td>
<td>5.78</td>
</tr>
<tr>
<td>Manufactured Products</td>
<td>64.97</td>
</tr>
<tr>
<td>Food Products</td>
<td>9.97</td>
</tr>
<tr>
<td>Non-Food Products</td>
<td>55</td>
</tr>
<tr>
<td>Fuel and Power</td>
<td>14.91</td>
</tr>
</tbody>
</table>

Source: www.gktoday.in/blog/measurement-of-inflation-in-india/

For your examinations, you may note down the below observations: The decreasing order of three groups of items in terms of weightage is manufactured products, primary articles, fuel & power Total weightage of food items and products and the total of the two is around 30. Among manufactured products, the highest weightage is of chemicals and chemical products. We note here that WPI does not take into consideration the retail prices or prices of the services.

Consumer Price Index
Consumer Price Indices (CPI) released at national level are: CPI for Industrial Workers (IW) CPI for Agricultural Labourers (AL)/ Rural Labourers (RL) CPI (Rural/Urban/Combined). While the first two are compiled and released by the Labour Bureau in the Ministry of Labour and Employment, the third by the Central Statistics Office (CSO) in the Ministry of Statistics and Programme Implementation. In India, RBI uses CPI (combined) released by CSO for inflation purpose. Important notes on this index are as follows:

Base Year
Base year for CPI (Rural, Urban, and Combined) is 2012=100.

Items
The number of items in CPI basket include 448 in rural and 460 in urban. Thus, it makes it clear that CPI basket is broader than WPI basket. The items in CPI are divided into 6 main groups as follows:

<table>
<thead>
<tr>
<th>Item Group</th>
<th>Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food and beverages</td>
<td>54.18</td>
</tr>
<tr>
<td>Pan, Tobacco and Intoxicants</td>
<td>3.26</td>
</tr>
<tr>
<td>Clothing &amp; Footwear</td>
<td>7.36</td>
</tr>
<tr>
<td>Fuel &amp; Light</td>
<td>7.94</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>27.26</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: www.gktoday.in/blog/measurement-of-inflation-in-india/
Key differences between WPI & CPI
Primary use of WPI is to have inflationary trend in the economy as a whole. However, CPI is used for adjusting income and expenditure streams for changes in the cost of living. WPI is based on wholesale prices for primary articles, administered prices for fuel items and ex-factory prices for manufactured products. On the other hand, CPI is based on retail prices, which include all distribution costs and taxes. Prices for WPI are collected on voluntary basis while price data for CPI are collected by investigators by visiting markets. CPI covers only consumer goods and consumer services while WPI covers all goods including intermediate goods transacted in the economy. WPI weights primarily based on national accounts and enterprise survey data and CPI weights are derived from consumer expenditure survey data.

GDP Deflator
The most comprehensive measure is GDP deflator which is measured as ratio of GDP (Gross Domestic Product) at current prices to GDP at constant prices. Since it encompasses the entire spectrum of economic activities including services, the scope and coverage of national income deflator is wider than any other measure. This data is released by the Central Statistical Organisation (CSO) but is not used as it comes quarterly and with a 2 month lag.

Overview
Inflation in India is calculated based on the Consumer Prices Index for Industrial Workers (CPI-IW). Consumer Prices are representing the prices that the end consumer has to pay for the product or service together with all taxes and fees.

Effects of inflation
- **Production:** Producers earn wind-fall profits in the future. They invest more in expectation of higher profits in the long run. This in turn increases employment, production and income. But this is only possible up to the full employment level. The prices rise more than production as the resources are fully employed when further investment beyond this level is invested which will lead to increase in severe inflationary pressures within the economy. Therefore, inflation undesirably affects production after the level of full employment.
- **Income and Wealth Redistribution:** There are two ways of measuring the Income and Wealth Redistribution. The first way is based on the changes of factors that affect income such as wages, salaries, dividends etc. Second, the size distribution of income over time i.e.; if the incomes of rich have increased and that of the middle class or the poor has decreased with inflation.
- **Social and Political Effects:** By broadening the difference between the rich and the poor, rising prices create dissatisfaction amongst the crowds. Strikes can lead to loss in production. The efficiency of the economy reduces due to black marketing, adulteration, speculation, etc. which results in more corruption. Rising prices also creates anxieties and protests by political parties opposed to the government. If they become restless, they may bring the downfall of the government. Many governments have been sacrificed at the altar of inflation which will lead to Political damage and to the country

Trends in inflation
- **Wholesale Price Index (WPI):** The WPI, the widely used measure, is the calculated weighted arithmetic mean of price relatives of 435 commodities which includes 98 primary commodity articles, 19 items of fuel, power, light and lubricants and 318 manufactured products, each item being assigned equal weight and for each item there is a only a single price quotation. The Trends in Inflation during the post reform period showed that the rate of inflation was very high during the first half of the 1990’s. The annual average inflation was estimated as 10.6%. In the second half the rate of inflation fell to 5.1%
- **Consumer Price Indices (CPI):** The consumer price indices give an indication in the variation of consumption expenditure of different sections of people. Inflation as measured in terms of CPI it shows that there has been a continuous increase during the second half of the present decade

Costs and consequences of inflation
As the value of savings is reduced, the value of money is lost and people start losing their confidence in money. Inflation can get out of hand when the price increase leads to higher wage demand as people try to maintain their standard of living. This is known as a Wage-Price Spiral. When the real incomes fall the employees in the poor positions lose out and hence the consumers and businesses on fixed incomes loses their value of money.

Facts and figures
**India’s Inflation Rate for The Year Of 2016**

![Graph showing India’s Inflation Rate for The Year Of 2016](Source: www.cdn.tradingeconomics.com)
India’s Inflation Rate

![India’s Inflation Rate Graph]

Source: www.tradingeconomics.com: Ministry of Statistics and Programme Implementation (MDSPI), India

Conclusion
After a thorough understanding we reached to a conclusion that inflation plays a major role, to weaken the economy. The main cause of Inflation can be seen in food articles, which creates an impact on weaker sections of the people in the nation. The Government and Policy creators of the economy should think more on how to reduce inflation. Food is universal need for people. If the inflation is more in food articles, it will harm the country people. If the Per Capita Income of the people is less, the survival becomes very difficult with high inflation in the country. This also gives us a clear understanding on the current inflation position in India.

References