SRIRAM'sIAS

INFLATION: CONCEPTS, FACTS AND POLICY

Inflation means a persistent rise in the price of goods and services. While inflation may the proof of growth- assuming it is the demand that is riving up prices, inflation when unchecked hurts welfare as it reduces the purchasing power of money. It impoverishes the poor disproportionately more as a greater proportion of their incomes are needed to pay for their consumption. Inflation reduces savings; pushes up interest rates; dampens investment; leads to depreciation of currency thus making imports costlier which feeds into inflation further.

Depending upon the rate of growth of prices, inflation can be of the following types:

Creeping inflation is a rate of general price increase of upto 4% a year. It has the same effect of erodeing the purchasing power of money when continued over many years, but it is "manageable." It is largely welcome inflation as it shows there is growth and is even refered to as price stability. It is a deterrent to deflation. It may even be considered good for the economy as producers an traders make reasonable profits encouraging them to invest.

Trotting inflation is when creeping inflation increases a few more hundreds of basis points. (A basis point is 1/100. 100 basis point is 1%).

If not controlled, trotting inflation may accelerate into a galloping inflation which may be around 8-10% a year.

If it aggravates, galloping inflation can aggravate to "runaway" inflation which may change into a hyperinflation.

Hyperinflation is when prices are "out of control." That is, a monthly inflation rate of 20 or 30% or more- 'an inflationary cycle without any tendency toward equilibrium'. The worst is a monetary collapse, if prices are not reined in, in time, money loses its value and either barter may become popular or a foreign currency will become the dominant medium of exchange

It must be noted that rates of growth of prices that are attached to the above mentioned terms are not of universal application. The tolerance levels differ from country to country. Developed countries have far lower tolerance levels compared to developing countries. In India , from 2008-13, inflation ruled above 10% which is most unlikely to be tolerated in advanced economies.

Other related concepts are:

- deflation when there is a persistent general fall in the level of prices
- disinflation is the reduction of the rate of inflation
- stagflation which is a combination of inflation and rising unemployment due to recession and
- Reflation, which is when inflation returns after a spell of deflation and recession thus showing that growth is back as seen in the US and EU after the great recession (2007-09) when growth was revived.

Measures of Inflation

GDP deflator

It is the most comprehensive measure of inflation as it reports the change in prices of all domestically produced final goods and services in an economy. The GDP deflator is not based on a fixed market basket of goods and services but applies to all goods and services domestically produced as implied above.

Cost of living index

A certain standard of living requiring a specific set of goods and services is defined and the basket is tracked for price rise to check affordability. The cost of living is the cost of maintaining such predefined standard of living. When their cost goes up, the index goes up and is refered to as "dearer.". It has a value of 100 in the base year. An index value of 105 indicates that the cost of living is five percent higher than in the base year.

PPI

The price at which the producer sells to the wholesaler/distributor is the producer price. Tracking it is done by the Producer price index (PPIs). It gauges the change in the prices received by a producer. The difference with the WPI is accounted for by logistics, cost of credit, warehousing costs, transportation costs, margins, risk considerations etc. Producer price inflation measures the increase in prices of inputs like raw materials, wages, rupee exchange rate if imports are involved etc. The Department of Industrial Policy and Promotion, Ministry of Commerce and Industry set up a working group on the PPI in August 2014 under the chairmanship of **B.N. Goldar** to outline the timeline for launch of the PPI series.

WPI

Wholesale price index comprises transactions at first point of bulk sale in the domestic market.

CPI

Consumer price index measures the changes in prices paid by the consumer at the retail level. It can be for the whole economy or group-specific- for example, CPI for industrial workers etc as in India.

Types of Inflation Based On Causes

- **Demand-pull inflation:** inflation caused by increases in demand due to increased private and government spending, etc. It involves inflation rising as real gross domestic product rises and unemployment falls. This is commonly described as "too much money chasing too few goods". For example, food inflation related to protein items have been high-priced for many years in India as demand has shot up due to consumption patterns in India shifting due to income increases. Demand-pull inflation can be caused by money supply increasing. For example, the expansionary monetary policy of the RBI in 2009 saw rates come down and easy and cheap credit pushed up prices as demand grew. Wage inflation, money supply growth etc create this type of inflation. Collapse of demand causes prices to plunge- for example international crude prices crashed since 2014(there are many reasons other than the global slowdown though: US shale gas coming up; renewables emerging in a big way; Iran sanctions were lifted; Iraq was able to produce and export as the country stabilized)
- **Cost-push inflation:** When the cost of production goes up, it leads to cost-push inflation. For example, a higher prices for inputs; higher cost of capital; in India, monsoon failure and

damage to production; international commodity prices go up, for example, crude or food or metals. It is also refered to as "supply shoc," caused by reduced supplies due to increased prices of inputs, for example, crude prices globally had gone up till 2014 causing supply constraints which meant higher costs of production and so higher prices. Just as a shortage of goods tends to push prices up, an oversupply of commodities tends to induce the opposite effect on prices.

- **Structural inflation:** A type of persistent inflation caused by deficiencies in certain conditions in the economy such as a backward agricultural sector that is unable to respond to people's increased demand for food, inefficient distribution and storage facilities leading to artificial shortages of goods, backward technology and the resulting underproductivity is also a structural source of inflation. Food inflation witnessed for a decade in India till mid-2010s was structural in nature as the preference for protein foods is far ahead of its supplies and this is a phenomenon driven by income rise.
- **Speculation** in the commodity exchanges
- **Cartelization** of producers when they come together and manipulate the prices in the market for the goods or services that they produce for their own profits. For example, Competition Commission of India (CCI) had imposed penalties in 2016 upon 10 cement companies and their trade association i.e. Cement Manufacturers Association (CMA) for cartelisation in the cement industry.
- **Hoarding,** that is, accumulation of huge quantities of goods and releasing them into the market in conditions of scarcity at higher prices is also a cause of inflation. In 2017 September, Income Tax department raided major onion traders in Lasalgaon and surrounding areas in Nashik district of Maharashtra, one of the largest onion markets in the country on the basis of information that the onion traders of Lasalgaon and adjoining towns were involved in the hoarding of onions and planning to create an artificial scarcity in the market to inflate the prices. Essential Commodities Act, 1955 aims to check hoarding, among other things. In 2014, GOI included onions and potatoes for one year under the ECA to curb hoarding. The decision taken by the Cabinet Committee on Economic Affairs (CCEA) imposed limits on the quantity of onions and potatoes that individuals and wholesale traders could stockpile. It empowered state governments to take measures to prevent hoarding.
- Imported inflation when a country that depends on imports has its prices rising due to international prices of them rising or due to exchange rate depreciating

High Inflation Hurts

If inflation is high in an economy, the following problems can arise

- low income groups are particularly hurt
- People on a fixed income (e.g. pensioners, students receiving scholarships) will be worse off in real terms due to higher prices and same income as before
- inflation discourages exports as domestic sales are attractive . Inflation may erode the external competitiveness of domestic products if it leads to higher production costs such as wage increases, and higher interest rate.
- inflation can drag down growth as investment climate turns bad due to instability and uncertainty and also as interest rates are raised and cost of credit increases

- Inflation may discourage saving and thus hit investment. The savings pattern also gets skewed in favour of unproductive assets like gold as inflation may be higher than interest rates and yield is negative.
- Inflation tax is a hidden tax. It is the financial loss in the value of money incurred by holders of cash. Another way of seeing it is: when the government wants to tax people, they resist it. But the government needs the money. So it prints and releases the money into market and that inflates the economy which means people pay more for the goods and services they consume. The end result is that the tax that they did not pay is paid by way of price rise.
- strikes can take place for higher wages which can cause a wage spiral. Also if strikes occur in an important industry which has a comparative advantage the nation may see a decrease in productivity, exports and growth.
- Govt. fiscal deficit may go up as the need to subsidise is more to make goods and services affordable

Small Amount of Inflation Can Be Good

Inflation means growth, normally- higher incomes and more demand and so more inflation. It can be argued that a low level of inflation can be good if it is a result of innovation. Thus, there is encouragement for innovation .Also, a small price rise is necessary for wages to go up. It further helps the economy keep off deflation which can otherwise set off a recession. Besides, inflation at a moderate level is an incentive to the producer. Some see mild inflation as "greasing the wheels of commerce."

Losers: Individuals on fixed incomes, retirees, all creditors (who lent at fixed rate of interest.)

Gainers: Individuals whose incomes rise faster than inflation; debtors (who will pay back at fixed rate of interest).

Optimal Inflation

For the consumer, inflation should be negative which means prices should drop in absolute terms as it helps him afford goods and even save. That is possible when supplies outstrip demand on a sustainable basis which is not possible as the producer incurs losses. Negative inflation which is desirable from consumer viewpoint is also possible if government subsidises goods and services adequately. But that is impossible fiscally as deflation hurts fiscal receipts and on top of it, subsidies bill will damage the fiscal position even more. Besides, consumer will not be benefited if prices fall due to recession-driven deflation as it may hurt his own job and business prospects in the medium run.

So we can aim at inflation that is in the positive territory that augurs well for economic well being for all- producers and consumers alike. Too much inflation hurts from all sides. Too little is no incentive for growth. There has to be price stability at a moderate level of inflation. But the question remains how much of inflation will be good for the economy- growth, welfare and stability wise. In India, Reserve Bank of India and Government of India signed a Monetary Policy Framework Agreement in 2015 which says that the objective of monetary policy framework is mainly to maintain price stability, while keeping in mind the objective of growth. The monetary policy framework would be operated by the RBI. RBI would aim to contain consumer price inflation within 4 percent with a band of (+/-) 2 percent. This level of inflation is considered optimal from growth, stability, fiscal consolidation, foreign trade and welfare perspectives.

Concepts

Open Inflation

One of the primary responsibilities of the government is to ensure affordability of goods and services. Governments subsidise goods and services to keep them inexpensive. For example, kerosene, food, transport etc. The inflation that results when the government does not suppress it with subsidies and monetary policy is called open inflation.

Suppressed Inflation

Inflation is too big a risk for the economy for the government to allow it to continue unchecked. Therefore, fiscal and monetary actions are taken to manage it. That is called suppressed inflation. It is named so because, the problem of inflation is only managed and not resolved. It may reemerge if fiscal policies changed- reduce subsidies etc.

Headline Inflation

Headline inflation is a measure of the total inflation. It is an unadjusted number. It is the overall inflation as it is reported. It is best understood when contrasted with core inflation given below. Headline inflation is what consumers experience.

'Core' or' Underlying Inflation'

Core or underlying inflation measures the long-run trend in the general price level. Temporary effects on inflation are factored out to calculate core inflation. For this purpose, certain items are excluded from the computation of core inflation. These items include: changes in the price of fuel and food which are volatile or subject to short-term fluctuations and/or seasonal in nature like food items. In other words, core or underlying inflation is an alternative measure of inflation that eliminates transitory effects .The main argument here is that the central bank should effectively be responding to the demand side- for example, the money available in the market, demand for credit and so on and not the supply shocks like energy and food. Headline inflation on the other hand includes the official rate of increase in prices that excludes no item in the basket. Core inflation excludes the changes in the fuel and food articles and the food processing part of manufacturing.

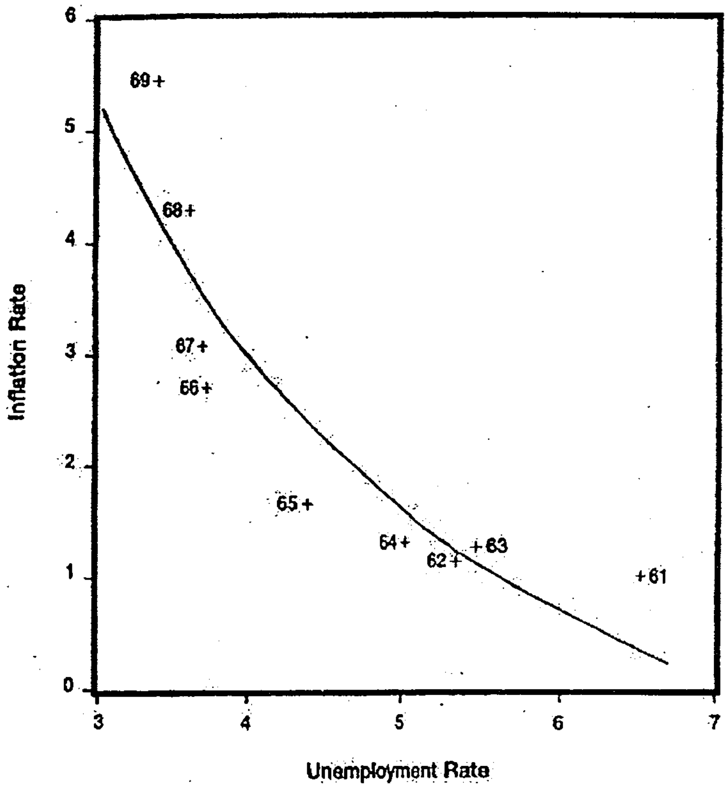
Headline and core inflation are calculated both at the wholesale and consumer levels. CPI (Combined, that is rural and urban) headline inflation is considered when inflation is being targeted in the country by the RBI since 2015.

Philips's Curve

The inverse relationship between rate of inflation and rate of unemployment is shown in the Phillips curve: price stability has a trade-off against employment. Some level of inflation could be considered desirable in order to minimize unemployment.

Potential output (sometimes called the "natural gross domestic product") is an important concept in relation to inflation. It is the level of GDP where the economy is at its optimal level of production, given various constraints- institutional and natural. (Discussed elsewhere in the Notes)

If GDP exceeds its potential, inflation will accelerate and if GDP falls below its potential level, inflation will decelerate as suppliers attempt to use excess capacity by cutting prices.



Deflation

Deflation is a prolonged and widespread decline in prices that causes consumers and businesses to curb spending as they wait for prices to fall further. It is the opposite of inflation, when prices rise, and should not be confused with disinflation, which merely describes a slowdown in the rate of growth of prices. Deflation may occur at the wholesale or retail level. It may result for demand side or supply side reasons.

Deflation is hard to deal with because it is self-reinforcing. Deflation needs to be checked with Keynsian stimulus or it can breed deeper deflation, leading to what is known as a deflationary spiral.

When an economy experiences deflation, demand from businesses and consumers to buy products goes down because they expect to pay less later as prices fall further. With crashing demand, producers can not to sell and go bankrupt, unemployment rises reducing demand further. That causes deflation to become even more aggravated. It makes it more expensive to service existing debts. As debt becomes unserviceable, the risk of default and bankruptcy rises too and banks become reluctant to lend as their own NPAs rise.

Remedy:

- Tax cuts to boost demand from consumers and businesses
- Lowering central bank interest rates to encourage economic activity
- Printing more currency to boost money supply
- Capital injections into the banking system
- Increase government spending on projects that boost the return on private investment

India did not face the threat of deflation at the retail level but till December 2015 for 14 consecutive months, Wholesale Price Index (WPI) inflation was in the negative.

Inflation And Corruption

The link is as follows

- through black money
- hoarding not being checked
- commodity prices being manipulated through speculation as NSEL crisis shows.

Inflation Targeting

Inflation targeting focuses mainly on achieving price stability as the ultimate objective of monetary policy. This approach entails the announcement of an inflation target- either a number or a range, that the central bank promises to achieve over a given time period. The targeted inflation rate will be set jointly by the RBI and the government, the responsibility of achieving the target would rest primarily on the RBI. This would reflect an active government participation in achieving the goal of price stability with fiscal discipline by way of a rational borrowing programme (not borrowing in excess).

Monetary policy and fiscal policy have to converge for achievement of inflation targeting Advantage is that it promotes transparency in the conduct of monetary policy. Further, it increases the accountability of monetary authorities to the inflation objective.

Reserve Bank of India (RBI), entered into an agreement with the Ministry of Finance in 2015 that mandates the RBI to bring inflation below 6% by January 2016, and 4% (plus or minus 2%) in the following years. Target is set by GOI in consultation with RBI but the RBI is responsible for achieving it.

In case of failure to meet targets, RBI has to explain the reason for its failure to meet as well as give a timeframe within which it will achieve it. RBI will publish the operating targets as well as operating procedure for the monetary policy though which the target for the monetary policy will be achieved. The RBI will also be required to bring a document every six months to explain the sources of inflation and forecast for inflation for next 6-18 months.

As recommended by Urjit Patel Committee in 2013, RBI has been using headline CPI (Combined) inflation as the nominal anchor for targeting.

This flexible inflation targeting framework which is a paradigm shift is positive for India because it increases monetary policy transparency, predictability and chances of effectiveness.

Indices of Inflation

Changes in the price levels at the wholesale and retail level are tracked by various price indices in India- WPI and CPI. 3 CPIs exist for different consumer groups each of which is homogenous.

All price indices use a particular year as a "base year". That means that rises or falls in prices are measured with reference to the price in that year. For example, the base year used for the Wholesale Price Index is 2011-12 from the fiscal year 2017-18. Wholesale prices of all products in the basket with their respective weightages in that year add upto "100". If, in the base year, the wholesale price of *gur* was Rs.2 a kg, and rose by 50 paise the following year, it would mean that the wholesale price index for *gur* would rise to 125. But the movement of an index is based on the average of price movement of all the goods in the basket and not just one article.

Ideally the same base year should be used for all indices but different base years are used for different price indices due to convenience, data availability, logistics etc.

WPI

Main uses of WPI

The main uses of WPI are the following: a) Provides estimates of inflation at the wholesale transactions level for the economy as a whole. This helps in timely intervention by the Government to check inflation, in particular inflation in essential commodities, before the price increase spills over to retail prices. WPI is used as deflator for many sectors of the economy for estimating GDP by CSO. It is also used to deflate nominal values of production in high frequency IIP. Global and domestic investors also track WPI as one of the key macro indicators for their investment decisions.

The Indian WPI is updated on a monthly basis. The WPI is published by the Economic Advisor in the Ministry of Commerce and Industry, with a month lag. The various commodities taken into consideration for computing the WPI can be categorized into primary article, fuel and power, and manufactured goods. Primary articles included for the computation of WPI include food articles, non-food articles and minerals. In the fuel, power, light and lubricants, electricity, coal mining and mineral oil are included. The manufactured goods category encompasses food products; beverages, tobacco and tobacco products, wood and wood products, textiles, paper and paper products, basic metals and alloys, rubber and rubber products and many others. The index is a vital guide in economic analysis and policy formulation.

The WPI is not intended to capture the effect of price rise on the consumer though it generally and broadly indicates it. WPI has an All India character. It is due to these attributes that it is widely used in business and industry circles and in Government and is generally taken as an indicator of the rate of inflation in the economy. The inflation rate is calculated on point to point basis i.e. on the basis of the variation between the index of the latest week of the current year and for the corresponding week of the previous year.

There are a number of agricultural commodities, especially, some fruits and vegetables, which are of a seasonal nature. Such seasonal items are handled in the index in a special manner. When a particular seasonal item disappears from the market and its prices are not quoted, the index of such an item ceases to get compiled and its weight is distributed over the remaining items and new seasonal items, if any, in the concerned sub-group.

Limitations on WPI

The accuracy of WPI is unsatisfactory even after the introduction of the revised series in 2017. Services such as rail and road transport, health care, postal, banking and insurance, for example, are not part of the WPI basket. Neither are the products of the unorganised sector that are estimated to constitute about 35 per cent of the total manufactured output of the country. The index thus falls well short of being a broad based indicator of the price level even in its construction.

New All-India Wholesale Price Index (WPI)

The Government periodically reviews and revises the base year of the macroeconomic indicators as a regular exercise to capture structural changes in the economy and improve the quality, coverage and representativeness of the indices. As a part of the ongoing exercise, the base year of All-India WPI has been revised from 2004-05 to 2011-12 by the Office of Economic Advisor (OEA), Department of Industrial Policy and Promotion, Ministry of Commerce and Industry to align it with the base year of other macroeconomic indicators like the Gross Domestic Product (GDP) and CPI. The revision entails shifting the base year to 2011-12 from 2004-05, changing the basket of commodities and assigning new weights to the commodities. For the new series with base 2011-12=100, Working Group was chaired by Late Dr. Saumitra Chaudhuri, Member, erstwhile Planning Commission and comprised most stakeholders. WPI basket does not cover services.

What Is New In The New Series

In the new WPI series significant improvement in concept, coverage and methodology has been made. In the revised WPI basket, the number of items has been increased from 676 to 697. Efforts have been made to enhance the number of quotations from 5482 to 8331. The increase in number of quotations has been done across the major groups to ensure comprehensive coverage and representativeness. New definition of wholesale price index does not include taxes in order to remove impact of fiscal policy. This also brings new WPI series closer to Producer Price Index and is in consonance with the global practices. Further for the first time a Technical Review Committee has been set up to recommend appropriate methodological intervention to continuously improve coverage, quality and timeliness of the WPI.

The new series also present separate 'WPI Food Index' which along with CPI Food Price Index published by CSO would help monitor the food inflation effectively.. The seasonality chart of the Fruits and Vegetables Sub Group under the Food Articles has been updated in the new series. Prices of seasonal fruits and vegetables will be available for longer period. For example, tomato price index will now be available around the year as against eight months in the earlier series of WPI (base 2004-05). Cauliflower was earlier available only for six months but now it will be available for eight months in year.

Why is the indirect tax not been included in the compilation of WPI in the new series?

A significant change in the new series of WPI has been the exclusion of indirect taxes while compiling indices of manufactured products. The Working Group for revision of WPI had recommended that taxes should not figure in this measure so that price signals emerging from production side of the economy are not influenced by the fiscal policy.

Excluding indirect taxes brings the new series of WPI conceptually closer to the concept of output Producer Price Index (PPI). This is also in keeping with the international best practices. The exclusion of indirect taxes would also ensure the continuity and compatibility of new WPI series when Goods and Services Tax (GST) is introduced.

Summary of New WPI

The base year of wholesale price index (WPI) has been revised to 2011-12 from 2004-05 by the Office of the Economic Adviser. Govt. of India, Ministry of Commerce & Industry Department of Industrial Policy & Promotion (DIPP) who is in charge of the WPI. Under the revised series, WPI will continue to consist of three major groups namely, Primary Articles, Fuel & Power and Manufactured Products. Item level prices do not include indirect taxes in order to remove the impact of fiscal policy. There has been an increase in number of source agencies in general across all major groups while dormant sources have been removed. Additionally, a new WPI Food Index has been compiled combining the Food Articles under Primary Articles and Food Products under Manufactured Products.

WPI with 2011-12 base year						
Groups	**Weight**	**Items**	**Quotations**	**Weight**	**Items**	**Quotations**
Base year	**2004-05**	**2004-05**	**2004-05**	**2011-12**	**2011-12**	**2011-12**
Primary Articles	20.12	102	579	22.62	117	983
Fuel & Power	14.91	19	72	13.15	16	442
Manufactured Products	64.97	555	4,831	64.23	564	6,906
WPI	100	676	5,482	100	697	8,331

The overall inflation trajectory of FY17 has shifted downwards due to the change in the base year. The Government of India (Allocation of Business) Rules, 1961, with subsequent amendments, assigns the responsibility for compiling the WPI to the Office of the Economic Adviser in the Department of Industrial Policy and Promotion under the Ministry of Commerce and Industry. The Economic Adviser holds the final authority for all decisions regarding the WPI.

CPI

A **Consumer Price Index (CPI)** measures changes in the prices of a basket of consumer goods and services purchased by households. The CPI measures price changes by comparing, through time, the cost of a fixed basket of commodities. It is based on a point to point comparison like the WPI- that is, prices at two points of time are compared. For example, prices of October 2018 are compared to the prices of October 2017. Sub-indexes are computed for different categories and sub-categories of goods and services, being combined to produce the overall index with weights reflecting their shares in the total of the consumer expenditures covered by the index. CPI can be used to index (i.e., adjust for the effect of inflation) the real value of wages, salaries, pensions, for regulating prices etc.

The dearness allowance of Government employees and wage contracts between labour and employer is based on this index.

Over the years, CPIs have been widely used as a macroeconomic indicator of inflation, and also as a tool by Government and Central Bank for targeting inflation and monitoring price stability (2015 onwards based on Urjit Patel committee report in 2013) . CPI is also used as deflators in the National Accounts. Therefore, CPI is considered as one of the most important economic indicators.

Consumer price index numbers were known as "Cost of Living Index Numbers" prior to 1955. The Sixth International Conference of Labour Statisticians recommended the change in nomenclature from Cost of Living Index to Consumer Price index. The Cost of living index is a more broader term which includes not only changes in prices but several other factors like change in consumption habits and standard of living.

Presently the consumer price indices compiled in India are:

- CPI for Industrial workers CPI (IW)
- CPI for Agricultural Labourers CPI (AL)

- Rural Labourers CPI (RL)
- CPI(Urban)
- CPI(Rural)

Till 2012, in India there were only following three CPIs compiled and released on national level.

- Industrial Workers (IW) (base 2001),
- Agricultural Labourer (AL) (base 1986-87) and
- Rural Labourer (RL) (base 1986-87)

There was another CPI called the Urban Non-Manual Employees (UNME) (base 1984-85) but was discontinued by the CSO from 2010. For Industrial Workers (CPI-IW), a basket of 370 commodities is tracked; for Agricultural Labourers (CPI-AL), 60 commodities. The baskets and the weightages to each item have been determined on the basis of surveys of consumption patterns. All-India figures declared are averages.

Each commodity is given a specific weightage, which differs from one index to another index. For example, the CPI-AL would give a greater weightage to foodgrains than the CPI-UNME (since discarded), since a greater proportion of the agricultural labourer's expenditure would go toward foodgrains, and he would be unlikely to buy the sort of items the office-goer would buy.

In the organised sector, CPI-IW is used as a cost of living index. In accordance with the Government of India (Allocation of Business) Rules, 1961, as amended from time to time, it is the responsibility of the Ministry of Labour to compile and release the data on the CPI for Industrial Workers and the data on the CPI for Rural Labourers.

New CPI Series 2015

The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation in 2015 revised the Base Year of the Consumer Price Index (CPI) from 2010=100 to 2012=100. In this revised series, many methodological changes have been incorporated, in order to make the indices more robust.Due to change in the consumption pattern from 2004-05 to 2011-12, the weighing diagrams (share of expenditure to total expenditure) have changed. A comparison of weighing diagrams of the old and revised series is given in the table below:

- The number of Groups, which was five in the old series, has now been increased to six. 'Pan, tobacco and intoxicants', which was a Sub-group under the Group 'Food, beverages and Tobacco', has now been made as a separate Group. Accordingly, the Group 'Food, beverages and Tobacco' has been changed to 'Food and beverages'.

- Egg, which was part of the Sub-group 'Egg, fish and meat' in the old series, has now been made as a separate Sub-group. Accordingly, the earlier Sub-group has been modified as 'Meat and fish'.

- Sample size for collection of house rent data for compilation of House Rent Index, which was 6,684 rented dwellings in the old series, has now been doubled to 13,368 rented dwellings in the revised series.

The new CPI index, weight of food and beverages is **45.86%** and weight of fuel and light segment is **6.84 %**.

The basket of items and their weighing diagrams have been prepared to make it consistent with the international practice of shorter reference period for most of the food items and longer reference period for the items of infrequent consumption/purchase.

Price data are collected from selected towns by the NSSO and from selected villages by the Department of Posts.

Consumer Price Indices (Rural, Urban, Combined), compiled by the Ministry of Statistics and Programme Implementation, reflects the realistic picture of the prices of consumer goods and services because of the following reasons:

- prices are collected from 1,181 selected village markets covering all districts of the country for rural areas and from 1,114 urban markets of 310 selected towns of urban areas;
- these markets are, more or less equally, distributed over different weeks of a month to capture price variations during the month;
- only transaction prices, that is prices actually paid by the consumers, are collected for compilation of indices;
- the items having significant share in the overall consumption expenditure of the households, including the Public Distribution System (PDS) items and the items consumed by majority of the households are included in the basket

All cities/towns having population (Census, 2001) more than nine lakh and State/UT capitals not covered therein have been selected. The Consumer Price Index is released every month on 12th day of the following month.

The Reserve Bank of India (RBI) has started using CPI-combined as the sole inflation measure for the purpose of inflation management and monetary policy. As per the agreement on Monetary Policy Framework between the Government and the RBI (February 2015) given in detail elsewhere in the Chapter, the sole objective of RBI is price stability and a target is set for inflation as measured by the Consumer Price Index-Combined- 4% is the anchor with 2% up and down to make the range.

Difference Between Wholesale Prices And Consumer Prices

WPI measures price rise at the wholesale level. Wholesale means sale in large quantities and usually meant for resale. It covers a certain set of goods that are traded at the wholesale level. CPI on the other hand measures price rise at the retail level. There is a difference between the two in terms of prices. The difference is due to a number of factors. A substantial portion of the difference is accounted for by the retailers' margins which are built into what the consumer pays. Besides, the way the two indices are calculated differs both in terms of weightage assigned to products as well as the kind of items included in the basket of products.

While wholesale prices are more or less the same throughout the country, consumer prices or retail prices vary across regions (rural and urban) and also across cities according to the consumer preferences for certain products, supplies and purchasing power. Besides, taxes levied by states comprise an important component of the variation in prices of many products.

Divergence Between WPI and CPI

WPI reflects the change in average prices for bulk sale of commodities at the first stage of transaction while CPI reflects the average change in prices at retail level paid by the consumer. Major difference is in two index baskets. The prices used for compilation of WPI are collected at ex-factory level for manufactured products, at ex-mine level for mineral products and mandi level for agricultural products. In contrast, retail prices applicable to consumers and collected from various markets are used to compile CPI. The reasons for the divergence between the two indices can also be partly attributed to the difference in the weight of food group in the two baskets. CPI Food group has a weight of 39.1 per cent as compared to the combined weight of 24.4 per cent (Food articles and Manufactured Food products) in WPI basket. Similarly weights of the major petroleum products such as petroleum and HSD also vary significantly. The CPI basket consists of services like housing, education, medical care, recreation etc. which are not part of WPI basket.

A significant proportion of WPI item basket represents manufacturing inputs and intermediate goods like minerals, basic metals, machinery etc. whose prices are influenced by global factors but these are not directly consumed by the households and are not part of the CPI item basket. Thus even significant price rise or decline in items included in WPI basket need not necessarily translate into CPI in the short run. The rise or fall in prices at wholesale level spills over to the retail level after a lag. Middlemen and indirect taxes that add on make the CPI higher. The divergence is likely to get greater as the new WPI series excludes indirect taxes.

Which Index Should One Use?

The WPI is useful in certain contexts. For example, for industrialists, the costs of setting up a factory over the course of several years; and further to calculate the costs of production and returns over several years. The basket of items in the CPI does not include machinery, chemicals, and so on; secondly, the price of electricity in the CPI is the consumer tariffs, not the industrial tariffs; and so on.

Services And Price Index

While the WPI now does not include services, consumer price index (CPI) meant for industrial workers includes certain services such as medical care, education, recreation and amusement, transport and communication. On the other hand, some of the other major services such as trade, hotels, financing, insurance, real estate and business services do not find a mention either in the CPI(IW). In India, the services sector accounts for about 57 per cent of the GDP. In 2010, Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce & Industry constituted an Expert Committee to render technical advice for development of Service Price Index (SPI) and its related issues. The Committee is chaired by Prof. C. P. Chandrasekhar.

Producer Price Index

The process of introducing the producer price index (PPI) is underway in India. It means prices of goods as they are sold to the wholesalers by the producers. The difference between WPI and PPI is accounted for by the margins and other transport and distribution costs. The government in late 2014 set up a committee to devise Producer Price Index. The 13-member committee is headed by Professor BN Goldar and has representation from various central ministries and departments.

Food Price Indices

WPI food index

The government in mid-2017 revised the wholesale price index (WPI) by shifting to a new base year of 2011-12 from 2004-05 and added a new WPI food index to capture the rate of inflation in food items. Revision of macroeconomic data is undertaken to reflect changes in the economy.The WPI Food index is compiled by taking the aggregate of WPI for "Food Products" under "Manufactured Products" and "Food Articles" under "Primary Articles" using weighted arithmetic mean.In view of the sensitivity of food to the overall well being of people, it is important to track their prices as they fluctuate. During the 11th FYP period, food prices soared hurting the poor disproportionately. If we track the WPI food prices, the gap with the CPI food component can be better understood and remedies applied.

Consumer Food Price Index (CFPI)

Consumer Food Price Index (CFPI) is a measure of change in retail prices of food products consumed by a defined population group in a given area with reference to a base year. The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation (MOSPI) started releasing Consumer Food Price Indices (CFPI) for three categories -rural, urban and combined - separately on an all India basis from 2014. Like Consumer Price Index (CPI), the CFPI is also calculated on a monthly basis and methodology remains the same as CPI.

FAO Food Price Index

Globally, food price index is being released by Food and Agriculture Organization of the United Nations. The FAO Food Price Index is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices (Cereal, Vegetable Oil, Dairy, Meat and Sugar) weighted with the average export shares of each of the groups for 2002-2004.

National Housing Bank Residex

RESIDEX, the country's first official housing price index (HPI) was launched in 2007 covering 26 cities and was published till 2015 on a quarterly basis. It was discontinued then and has been revived in 2017. The revamped RESIDEX has been expanded to 50 cities spread over 18 States and UTs. These include 38 smart cities, of which 18 are state capitals. NHB RESIDEX enables the policy makers, banks, housing finance companies, builders, developers, investors, individuals, etc., to track the movement of housing prices across different cities in India on quarterly basis.NHB RESIDEX helps buyers and sellers to check and compare prices before entering a transaction. They can also analyse the price trends across different citiesIt not only has expanded city coverage (rising from 26 to 50, to be eventually raised to 100), a new base year (2012-13) and new data sources (with data from banks and home finance companies and market surveys).The NHB Residex currently offers two sets of quarterly Housing Price Indices (HPIs) across the cities it tracks. List prices of under-construction property, collated through a survey of developers, are captured in the'Market HPI'. Data reported by banks and finance companies that extend home loans, is collated into the'Assessment HPI'.

House Price Index (HPI) of Reserve Bank of India (RBI)

The Reserve Bank compiles quarterly house price index (HPI) (base: 2010-11=100) for ten major cities, viz., Mumbai, Delhi, Chennai, Kolkata, Bengaluru, Lucknow, Ahmedabad, Jaipur, Kanpur and Kochi. Based on these city indices, an average house price index representing all- India house price-movement is also compiled. These indices are based on the official data of property price transactions collected from registration authorities of respective state governments.

Beginning with Mumbai city, the Reserve Bank initiated the work of compiling a house price index (HPI) in 2007 .Over the quarters, the coverage has been extended by incorporating 9 more major cities, viz., Delhi, Chennai, Kolkata, Bengaluru, Lucknow, Ahmedabad, Jaipur Kanpur and Kochi and the base is shifted to 2010-11=100.1 Besides separate HPI for individual cities, an average HPI representing all-India house price movement is also compiled.

Collection of Statistics Act, 2008

Collection of Statistics Act, 2008 was made to bring in new rules aimed at improving data collection. Government will levy higher penalty for not sharing data and tougher punishment will be imposed in cases where manipulation of data is involved, they say.

Under the new Act, people or companies not divulging data would have to pay a fine of Rs 1,000 and they would be given a 14-day notice period to comply. If the information is not provided even after two weeks, the penalty will rise to Rs 5,000 per day.

Under the old Act, which was passed in 1953, the penalty was only Rs 500 for the first default and Rs 200 per day thereafter.

The new penalty scheme will ensure that data collection is done on time. It will increase the accuracy of the data. The Act also makes wilful manipulation or omission of data a criminal offence, punishable by a prison term that may extend up to 6 months. This penalty will also apply if a company prevents or obstructs any employee from collecting data. The Collection of Statistics Act, 2008, gives powers to the government to classify any statistics as "core statistics" and also determine the method to collect and disseminate the same.

Deflation

Deflation is a prolonged and widespread decline in prices that causes consumers and businesses to curb spending as they wait for prices to fall further. It is the opposite of inflation, when prices rise, and should not be confused with disinflation, which merely describes a slowdown in the rate of inflation. Deflation occurs when an economy's annual headline inflation indicator -- typically the consumer price index -- enters negative territory.

Deflation is hard to deal with because it is self-reinforcing. Put simply, unless it is stopped early, deflation can breed deflation, leading to what is known as a deflationary spiral. When an economy has fallen into deflation, demand from businesses and consumers to buy products falls because they expect to pay less later as prices fall. But as producers struggle to sell and go bankrupt, unemployment rises, reducing demand further. That causes deflation to become more pronounced.

It makes it more expensive to service existing debts. This is as true of governments, who have borrowed trillions of dollars globally to prop up the financial sector, as it is for consumers. As debt becomes more expensive to pay off, the risk of default and bankruptcy rises too, making banks more wary of lending. This reduces demand and further exacerbates the deflationary problem.

Remedy for remedy

- Tax cuts to boost demand from consumers and businesses
- Lowering central bank interest rates to encourage economic activity
- Printing more currency to boost money supply
- Capital injections into the banking system
- Increase government spending on projects that boost the return on private investment

India did not face the threat of deflation as demand has not dropped so much. Also, food scarcity meant food prices did not fall. In fact they rose.

India and Deflation

On the WPI, we faced disinflation- rate of growth of prices fell but not prices themselves till the first quarter of 2009. In the second quarter and later, there was 'deflation' on the WPI. This negative inflation is due to higher base as inflation peaked in July 2008 due to international energy and food price rises because of speculation.

But since late 2014, WPI was in persistent deflation zone till 2016.

Growth -Inflation Trade Off

With high growth, economy overheats. Overheating of the economy means demand overshoots supply and there is pressure on prices. As growth creates more employment, incomes and demand, prices rise.

As prices rise, the central bank intervenes and raises rates to cool investment and consumption demand and so price rise is moderated. Repo rate- the policy rate- is the tool along with CRR and OMOs available to the central bank as signals to the economy that it is ready to act to soften prices -partly because the poor suffer disproportionately and partly because inflation can derail the medium and long term growth.

Such intervention by the central bank has a dampening impact on growth as higher interest rates prevent easy borrowing and thus demand slackens.

We witnessed the same in India with CRR and repo rates going down from 2009 for one year and later till 2011 going up in response to inflation in the country. The primary goal of the RBI is to moderate and stabilize prices as the inflation targeting framework of 2015 February madates.

Thus, growth and inflation are intimately connected- one being traded for the other depending upon where the growth situation stands.

As prices stabilise, growth resumes and a new and higher base is set for the growth process. Growth and inflation do have a trade off but that is only in the short term. As Dr.C.Rangarajan says, growth is a marathon while overheating and slow down are temporary pauses to gain greater strength.

Further, unless the RBI raises the policy rates with inflation going up, there is a danger of banks failing to attract deposits as real interest rates become negative and savings may be diverted to unproductive assets like gold with serious consequences- inside and outside for the economy.

Government Steps To Control Inflation

The Government has taken a number of short term and medium term measures to improve domestic availability of essential commodities and moderate inflation. It has procured record food grains. Even after keeping the minimum buffer stock, there are enough food grains to intervene in the market to keep the prices at reasonable level. A Strategic Reserve of 5 million tonnes of wheat and rice has also been created to offload in the open market when prices are high. This is in addition to the buffer stock held by FCI every year.

The price situation is reviewed periodically at high-level meetings such as the Cabinet Committee on Prices (CCP).

Fiscal Measures

- Reduced import duties on food items
- Import duties are raised on gold etc to contain CAD and step rupee depreciation

Administrative Measures

- Ban on exports of food items
- Dehoarding

Monetary Measures

Repo rates were kept high to make credit dearer.

Other Measures Taken To Control Inflation

The measures taken by the Government along with decline in global oil and commodity prices have contributed towards achieving low inflation. The measures taken by Government include, advising states to allow free movement of fruits and vegetables by delisting them from the APMC Act, banning of export of all pulses (except *kabuli channa* and organic pulses and lentils upto certain quantity), zero import duty on pulses and onion, empowering States/UTs to impose stock limits in respect of onion, pulses, edible oil, and edible oilseeds under the Essential Commodities Act, modest increase in minimum support prices in last two years etc. The vigilant monetary policy stance by the RBI and adoption of a Monetary Policy Framework agreement between Government and RBI has also led to moderation in inflation by bringing in an element of certainty of action by the RBI.

Disinflation in India 2017: The Structural Basis

In 2017, the Economic Survey of GOI and inflation watchers have opined that there could be a paradigm shift in the inflationary situation in India as well as the world.

There is deceleration of rate of growth of prices in the country for some months. It is called deflation. There are structural reasons for it according to experts. Oil prices are low since 2014 and will never go back to the earlier levels. US crude exports are forecast to exceed that of most Organization of the Petroleum Exporting Countries (OPEC) members by 2020.

Because of Chinese growth slowing, pressure on metal prices is expected to continue.

Globalization and lower inflation may go together due to labour's declining pricing power as a result of the threat of globalization – either be competitive or close down. Investment and jobs may shift if labour unionises and becomes aggressive. Expansion of the global labour force due opening up of Asia and the former Soviet bloc almost doubled the effective labour force involved in world trade.

Robots are another threat to labour.

In India, there are other factors that point to lower inflation. The fiscal deficit has come down, the rupee has strengthened, the rains have been good and the government has successfully managed food prices.