Inflation

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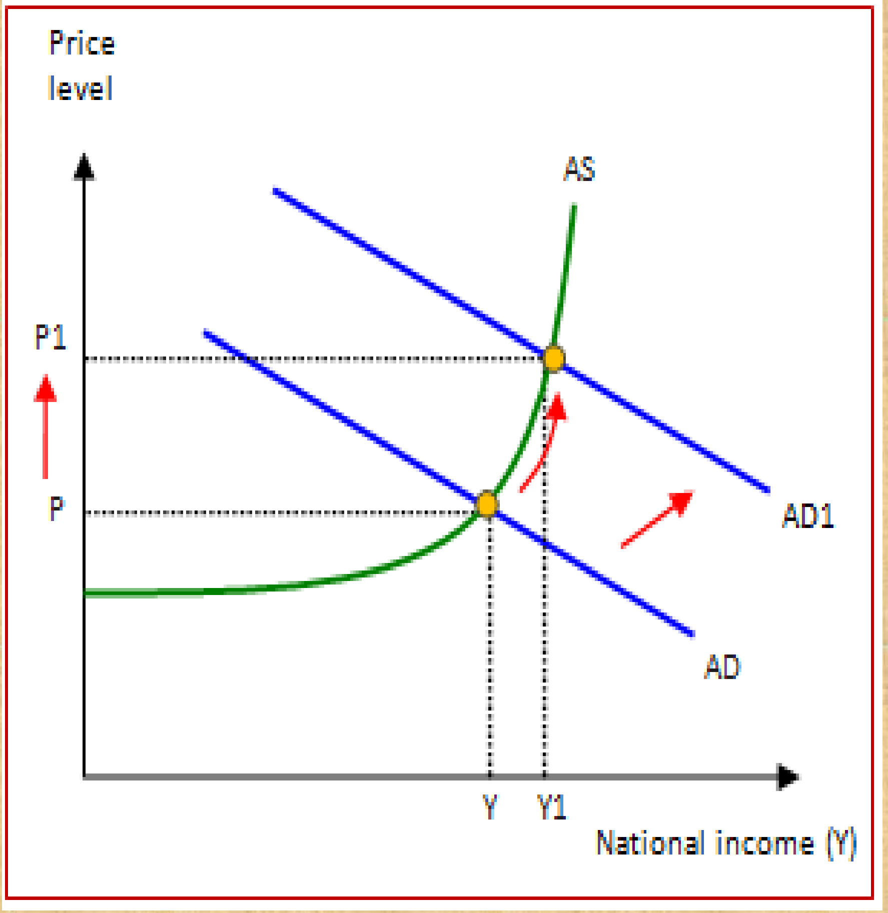
Inflation

- This is the process by which the price level rises and money loses value.
- There are two kinds of inflation:
- a) Demand pull
- b) Cost push

Causes and theories of inflation
Demand-pull inflation

- Demand-pull inflation: **Demand-pull inflation** arises when demand in an economy outpaces supply. It involves inflation rising as real gross domestic product rises and unemployment falls, as the economy moves along the Phillips curve. This is commonly described as "*too much money chasing too few goods*".
- More accurately, it should be described as involving "*too much money* ***spent*** *chasing too few goods*", since only money that is spent on goods and services can cause inflation. This would not be expected to persist over time due to increases in supply, unless the economy is already at a full employment level.
- Prices move faster than supply



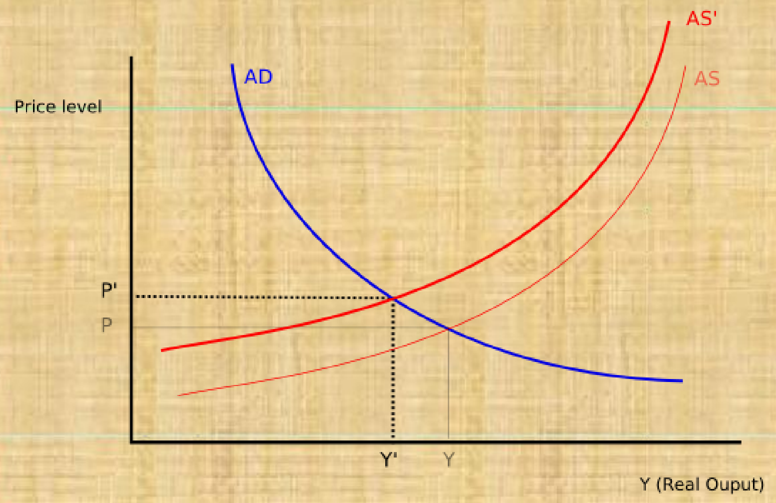
Demand pull inflation

Demand pull inflation may be due to :

- A depreciation of the exchange rate
- A reduction in direct or indirect taxation.
- The rapid growth of the money supply
- Rising consumer confidence and an increase in the rate of growth of house prices
- Increase in government purchases
- Increase in exports

Cost-push inflation

- **Cost-push inflation** is a type of inflation caused by substantial increases in the cost of important goods or services where no suitable alternative is available. A situation that has been often cited of this was the oil crisis of the 1970s, which some economists see as a major cause of the inflation experienced in the Western world in that decade.



Cost push Inflation

- Cost push inflation may arise because of :

a) **Increase in money prices of raw materials**

b) **Rising labour costs**

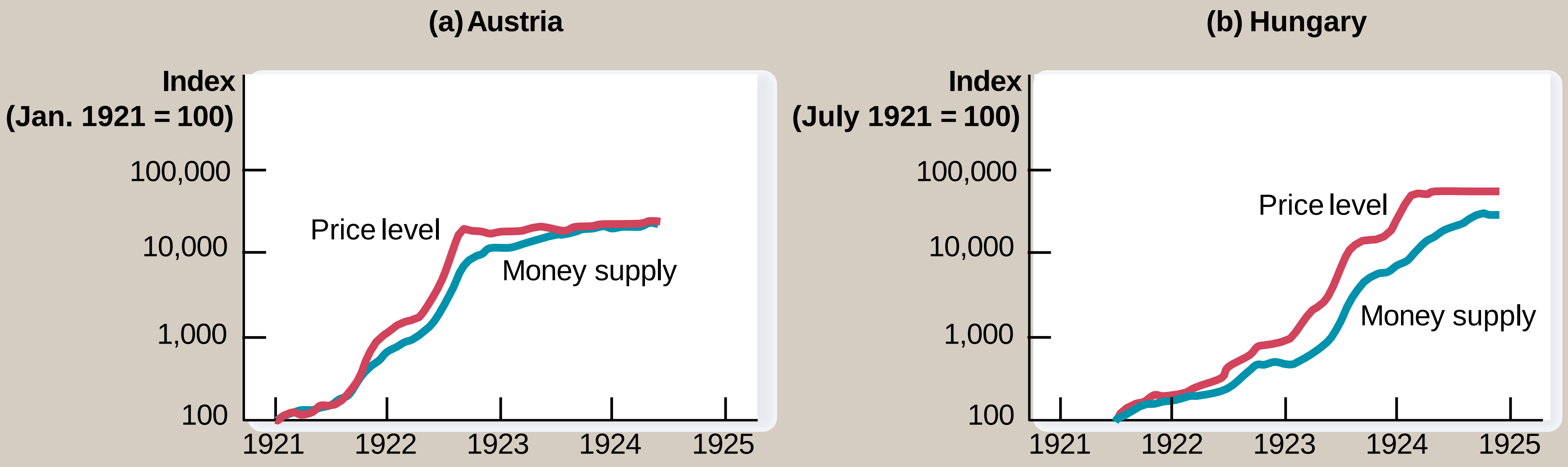
c) **Higher indirect taxes imposed by the government**

Hyper inflation

- Extremely rapid or out of control inflation.
- There is no precise numerical definition to hyperinflation.
- Price increases are so out of control that the concept of inflation is meaningless.
- The most famous example of hyperinflation occurred in Germany between January 1922 and November 1923.
- By some estimates, the average price level increased by a factor of 20 billic


Serie A
Hundert Millionen Mark
In 1923, a German housewife burned mark notes in her kitchen stove, since it was cheaper to burn marks than to use them to buy firewood.
usagold.com

Money and Prices During Hyperinflations



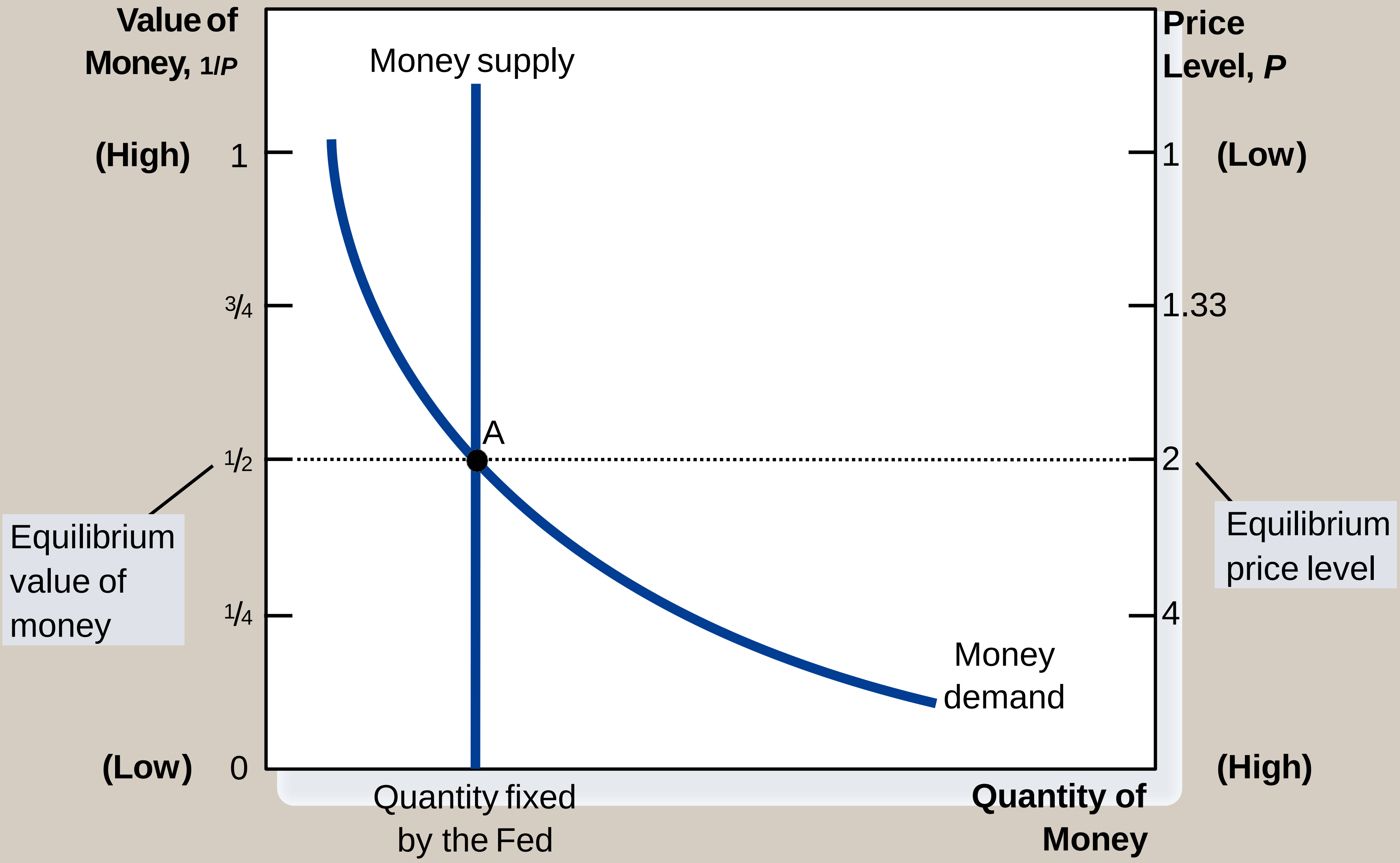
Stagflation

A condition of slow economic growth and relatively high unemployment accompanied by inflation.

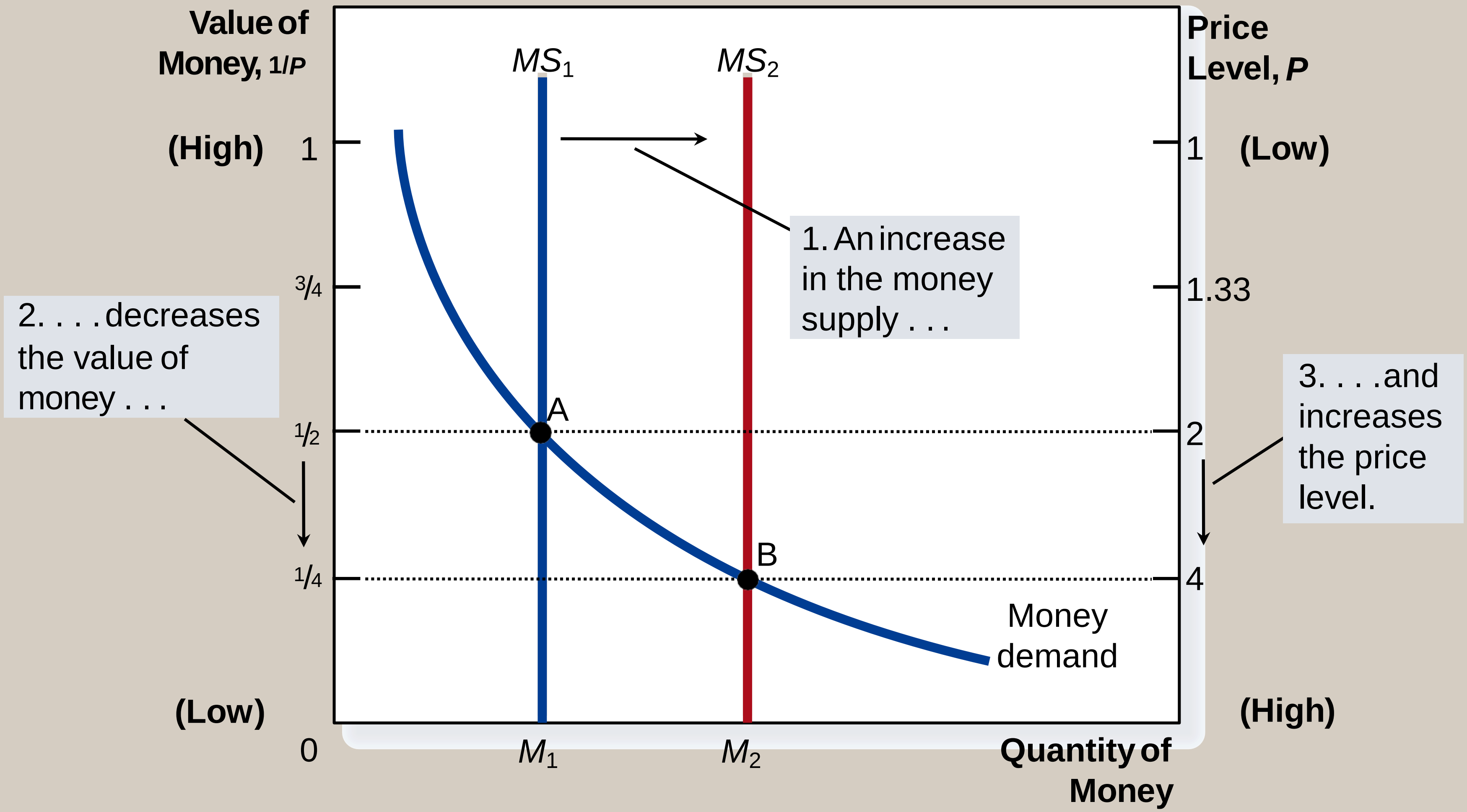
This happened to a great extent during the 1970s, when world oil prices rose dramatically, fueling sharp inflation in developed countries.

At least some central banks have expressed concern over inflation even as the global economy seems to be slowing down.

Money Supply, Money Demand, and the Equilibrium Price Level



The Effects of Excess Money Supply



Discussion question

- Why is inflation bad?

THE COSTS OF INFLATION

- Shoe leather costs
- Menu costs
- Tax distortions

The costs of expected inflation:

1. Shoeleather cost

High inflation increases the opportunity cost of holding cash balances and can induce people to hold a greater portion of their assets in interest paying accounts.	However, since cash is still needed in order to carry out transactions this means that more "trips to the bank" are necessary in order to make withdrawals, proverbially wearing out the "shoe leather" with each trip	Shoe leather costs are the resources wasted when inflation encourages people to reduce their money holdings.	Inflation reduces the real value of money, so people have an incentive to minimize their cash holdings.

- $\uparrow$ ***inflation rate*** $\Rightarrow$ $\uparrow$ ***higher nominal interest rate***

  $\Rightarrow \downarrow$ ***real money balances***

- Remember:In long run, inflation does not affect real income or real spending.
- So, same monthly spending but lower average money holdings means more frequent trips to the bank to withdraw smaller amounts of cash.

The costs of expected inflation:
2. Menu costs

- def: The costs of changing prices.
- Examples:
  - cost of printing new menus
  - cost of printing & mailing new catalogs
- The higher is inflation, the more frequently firms must change their prices and incur these costs.

Menu costs

- Menu costs are the costs of adjusting prices.
- During inflationary times, it is necessary to update price lists and other posted prices.
- This is a resource-consuming process that takes away from other productive activities.

The costs of expected inflation:

3. Unfair tax treatment

Some taxes are not adjusted to account for inflation, such as the capital gains tax.

Example:

- Jan 1:you buy Rs.10,000 worth of IBM stock
- Dec 31:you sell the stock for Rs.11,000, so your nominal capital gain is Rs.1000 (10%).
- Suppose π= 10% during the year. Your real capital gain is Rs.0.
- But the govt requires you to pay taxes on your Rs.1000 nominal gain!!

- The income tax treats the nominal interest earned on savings as income, even though part of the nominal interest rate merely compensates for inflation.
- The after-tax real interest rate falls, making saving less attractive.

- Unanticipated inflation is bad because it makes the economy behave likea giant casino.
- Gains and losses occur because of unpredictable changes in the value of money.
- If the value of money varies unpredictably over time, the quantity of goods and services that money will buy will also fluctuate unpredictably.
- Resources are also diverted from productive activities to forecasting inflation.
- Unanticipated inflation leads to :

a) Redistribution of income, borrowers and lenders

b) Too much or too little lending or borrowing

Relevance to Engineering Sector

How much would be required rupees to purchase an item that increased in cost of exactly the inflation rate? The cost of 30 year ago was ₹1000 cr and inflation has consistently averaged 4% per year

Future rupees = constant value rupees $(1+f)^n$

$$= 1000\,(1+0.04)^{30}$$

= ₹3234 cr

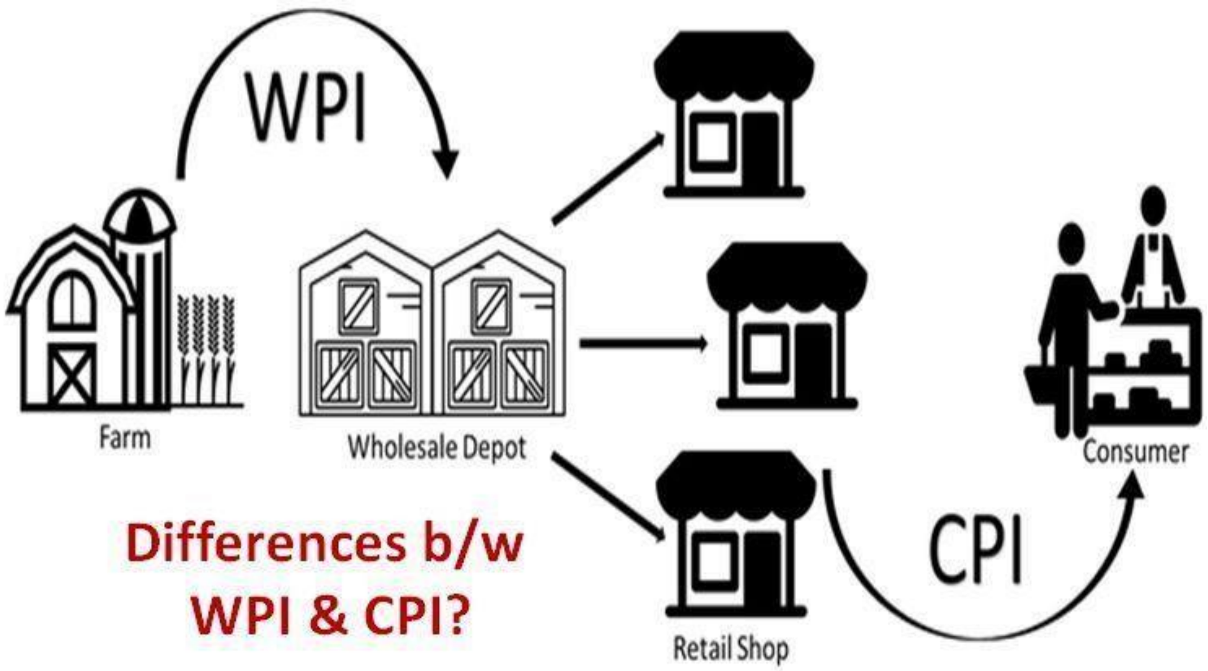
The Economic Impacts of Inflation

- Redistribution of Income and wealth among different groups
- Distortion in relative prices and outputs of different goods, or sometimes in output and employment for the economy as a whole.

How is inflation measured?

- ***WPI (Wholesale Price Index)***
- ***CPI (Consumer Price Index)***

CPI and WPI



WPI
Farm
Wholesale Depot
Retail Shop
CPI
Consumer
Differences b/w
WPI & CPI?

Wholesale Price Index

- It measures the **changes in the prices of goods sold and traded** in bulk by wholesale businesses to other businesses.
- Published by the **Office of Economic Adviser,** Ministry of Commerce and Industry.
- It is the **most widely used inflation indicator in India**.
- Major criticism for this index is that the **general public does not buy products at wholesale price**.
- The base year of All-India WPI has been revised from **2004-05 to 2011-12 in 2017**.

Consumer Price Index (CPI)

- It measures **price changes from the perspective of a retail buyer**. It is released by the National Statistical Office (NSO).
- The CPI **calculates the difference in the price of commodities and services** such as food, medical care, education, electronics etc, which Indian consumers buy for use.
- The CPI has **several sub-groups including food and beverages,** fuel and light, housing and clothing, bedding and footwear.
- Four types of CPI are as follows:
    - CPI for Industrial Workers (IW).
    - CPI for Agricultural Labourer (AL).
    - CPI for Rural Labourer (RL).
    - CPI (Rural/Urban/Combined).
    - Of these, the first three are compiled by the **Labour Bureau in the Ministry of Labour and Employment**. Fourth is compiled by the **NSO in the Ministry of Statistics and Programme Implementation**.
- **Base Year** for CPI is **2012**.
    - Recently, the Ministry of Labour and Employment released the **new series of Consumer Price Index for Industrial Worker (CPI-IW)** with base year 2016.
    - The Monetary Policy Committee (MPC) uses CPI data to control inflation. In April 2014, the **Reserve Bank of India (RBI)** had adopted the CPI as its key measure of inflation.

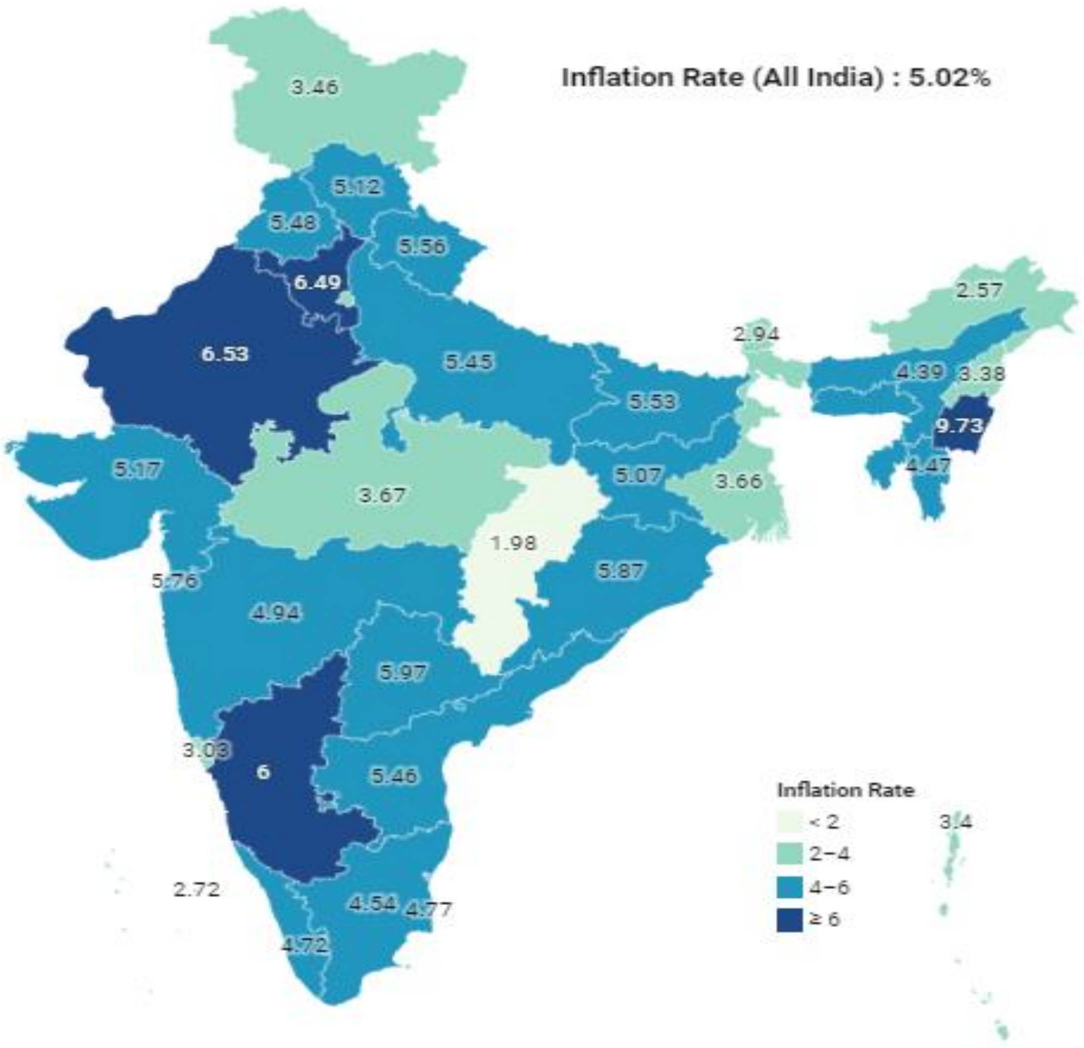
Basis For Comparison	Wholesale Price Index (WPI)	Consumer Price Index (CPI)
Meaning	WPI, amounts to the average change in prices of commodities at the wholesale level	CPI, indicates the average change in the prices of commodities, at the retail level.
Published by	Office of Economic Advisor (Ministry of Commerce & Industry)	Central Statistics Office (Ministry of Statistics and Programme Implementation)
Measures prices of	Goods only	Goods and Services both
Measurement of Inflation	The first stage of the transaction	The final stage of the transaction
Prices paid by	Manufacturers and wholesalers	Consumers
How many items covered	697 (Primary, fuel & power and manufactured products) Manufactured Products (65 percent of total weight), Primary Articles like food, etc. (20.1 percent), and Fuel and Power (14.9 percent)	448(Rural Basket) 460 (Urban Basket)
What type of items covered	Manufacturing inputs and intermediate goods like minerals, machinery basic metals etc.	Education, communication, transportation, recreation, apparel, foods and beverages, housing and medical care
Base year	2011-12	2012
Used by	Only a few countries including India	157 countries
Data released on	Primary articles, fuel, and power	Monthly basis

Core Inflation

['kȯr in-ˈflā-shən]

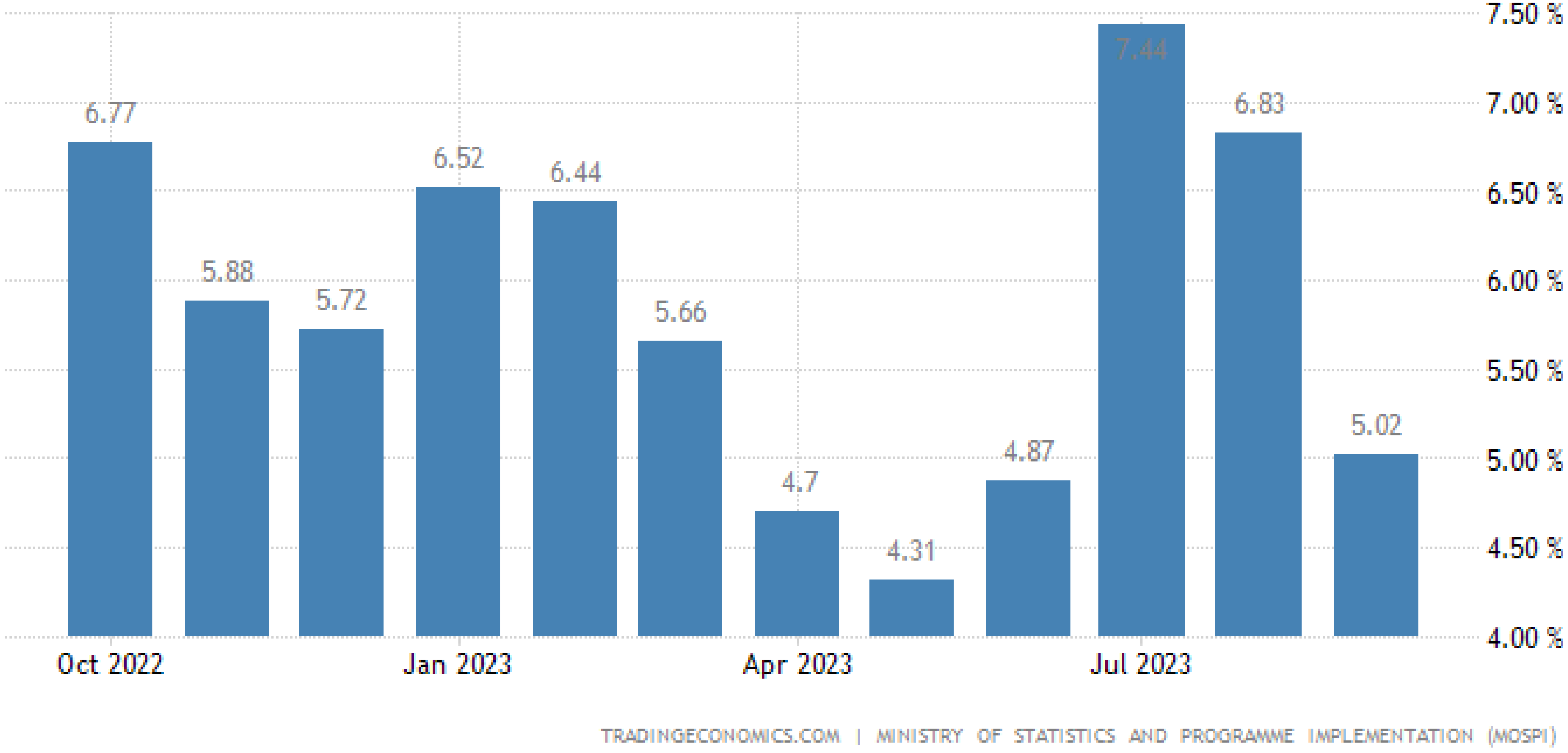
The change in the costs of goods and services, excluding the food and energy sectors.

Statewise Inflation Rates (%) for Sept 2023 (based on CPI)



Inflation rate shown against Jammu & Kashmir pertains to combined Union Territories of Jammu & Kashmir and Ladakh; Inflation rate pertains to Arunachal Pradesh (Rural) ; Map not to scale

Source: MoSPI, India. Prepared by Computer Centre @GoIStats • Get the data • Download image • Created with Datawrapper


6.77
5.88
5.72
6.52
6.44
5.66
4.7
4.31
4.87
7.44
6.83
5.02
7.50 %
7.00 %
6.50 %
6.00 %
5.50 %
5.00 %
4.50 %
4.00 %
Oct 2022
Jan 2023
Apr 2023
Jul 2023
TRADINGECONOMICS.COM | MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION (MOSPI)

Measures to Control Inflation

The government adopts various measures to control the increase in the price of goods and services. In India, the Reserve Bank of India (RBI) is responsible for controlling inflation. Inflation targeting and to keep inflation within the set target is the responsibility of RBI.

However, the RBI through its monetary policies can only control demand and pull inflation to a limited extent. The RBI can only control credit flow in the economy by taking away surplus money from the banking system. However, in this process economic growth is affected. The RBI cannot control that part of inflation which is driven by black money.

In case the public expenditure (expenditure of the government) remains high and the monetary policies become ineffective. At the same time, in controlling cost push inflation and structural inflation the role of government and state government is more important as compared to the RBI. Hence, inflation can be controlled only through the combined efforts of the RBI, the central government as well as state governments.

Monetary Policy Measures

- There is a close link between the money supply and inflation, Therefore, controlling money supply with the help of monetary policy can be controlled.
- Using contractionary monetary policy, the money supply in the economy can be decreased. This leads to decrease in aggregate demand in the market and thereby reduces inflation.
- Decrease in supply of money → rate of interest increases → Investment decreases → Aggregate demand decreases → prices decline → rate of inflation is lower
- Similar process follows when CRR, SLR, Repo Rates are increased and decreased.
- Rates like CRR, SLR, Repo Rate and Reverse Repo Rate are increased to impact the money supply in the economy by the RBI to control inflation.

Fiscal Policy Measures

Fiscal Policy refers to the revenue and expenditure policy of the government. y Contractionary Fiscal Policy can be useful to tackle high inflation rates.

The process is as follows: Increased taxes (keeping government spending constant) → disposable personal income decreases→ consumption decreases → aggregate demand decreases → prices decline → rate of inflation is lowered y Similar process follows if the government cuts

Some of the fiscal policy measures are – reducing import duties, banning exports or Imposing minimum export prices, suspending the futures trading of commodities, raising the stock limit for commodities, etc.

Supply Measurement Measures

- Supply Management Measures aims to increase the competitiveness and efficiency of the supply chain, putting downward pressure on long-term costs.
- Some of the supply management measures taken are-

1. Restricting exports of commodities in short supply and increasing their imports.
2. Effective implementation of the Essential Commodities Act, 1952 to prevent hoarding and speculation.
3. Incentivizing the increase in production of commodities through tax concessions, subsidies, institutional support etc.
4. Higher MSP has been announced to incentivize production and thereby enhance the availability of food items which may help moderate prices.
5. Fixing the ceiling prices of the commodities and taking measures to control the black marketing of those goods.
6. Reforming the supply chain through infrastructure development, foreign investments etc.


Thank You!