
INFLATION
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Inflation Explained:

What is it?

- Increase in the prices of most common goods and services over time.
- Decrease in the purchasing power of a unit of currency.
- Measured as a percentage change in a basket of goods and services.

Example:

- Last week, 5 kg of rice cost Rs. 100 (Rs. 20 per kg).
- This week, 4 kg of rice cost Rs. 100 (Rs. 25 per kg).
- Inflation rate: (25/20) * 100% = 25%.

Impact:

- Reduces purchasing power, making it harder to afford the same amount of goods and services.
- Can have negative effects on economic growth and stability.

Remember:

- Inflation is a normal part of most economies, but high inflation can be harmful.
- Central banks and governments use various tools to manage inflation.

How *Inflation* Has Changed the Price of a Cup of Coffee Over Time

Indicators used for measuring Inflation in India:

NDA CDS
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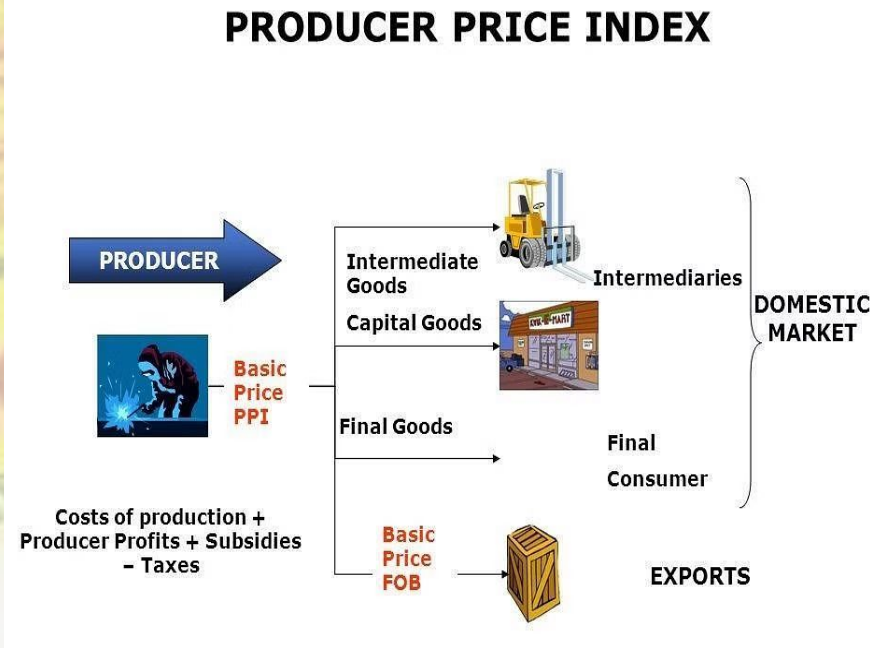
Levels:

- **Producer:** It is a measure of the average change in the selling prices over time received by domestic producers for their output. Not currently measured, but Producer Price Index (PPI) proposed.
- **Wholesaler:** Wholesale Price Index (WPI) used historically, but now considered less accurate.
- **Retailer (Consumer):** Consumer Price Index (CPI) currently used as primary measure.

Indices:

- **WPI:** Tracks prices of goods at wholesale level (676 items), excludes services.
- **CPI:** Tracks prices of goods and services at retail level (260 items), multiple versions for different groups.
- **New CPI:** Based on 2010 base year, covers rural, urban, and combined for all India and states/UTs.
- GDP deflator – It is a measure of general price inflation.



Q. Cause of inflation is

(a) Increase in money supply

(b) Fall in production

(c) Increase in money supply and fall in production

(d) None of the above

Key Points:

- RBI shifted from WPI to CPI for policy decisions in 2014 due to limitations of WPI.
- CPI is used for calculating Dearness Allowance and reflects cost of living better.
- Central Statistics Office releases CPI data.

Advantages of WPI:

- Earlier availability of data
- Reflects changes in production costs

Advantages of CPI:

- More relevant to common people
- Reflects changes in cost of living

Feature	Wholesale Price Index (WPI)	Producer Price Index (PPI)	Consumer Price Index (CPI)
Stage Measured	Wholesale transactions	Producer level	Retail transactions
Scope	Goods only	Goods & services	Goods & services
Taxes	Includes some indirect taxes	Excludes all indirect taxes	Includes all taxes paid by consumers
Weights	Based on net traded value	Based on supply	Based on consumer spending
Multiple Counting	May have double counting due to intermediate sales	No double counting	No double counting
Bias	Overestimates inflation due to changing consumption patterns	More accurate reflection of producer costs	More accurate reflection of consumer experience

Feature	Wholesale Price Index (WPI)	Consumer Price Index (CPI)	Index of Industrial Production (IIP)
Base Year	2011-12	2011-12	2011-12
Focus	Prices of bulk goods before retail	Prices of goods & services consumers buy	Growth rates in industry groups
Scope	Goods only	Goods & services	Manufactured products (64%)
Key Metrics	Food & Beverage, Fuel & Power, Primary Articles	Food & Beverage, Housing, Fuel & Light	Manufacturing, Mining, Electricity
Published by	Office of Economic Adviser (OEA)	National Statistics Office (NSO)	Central Statistical Organisation (CSO)
Importance	Historical data, reflects production costs	Most widely used inflation indicator	Key indicator of manufacturing sector
Limitations	Excludes services, not directly reflective of consumer experience	Multiple versions for different groups, complex	Excludes services, not a direct inflation measure

WHAT CAUSES INFLATION?

Cost-push Inflation

When production costs rise and the producers pass the increase on to consumers.

Demand-pull Inflation

When demand for goods increases and exceeds production capacity.

- RBI uses CPI (Combined) for inflation targeting.
- WPI data is available earlier but considered less accurate than CPI.
- IIP does not directly measure inflation but reflects economic activity in key industries

Q. Who among the following is most benefitted from inflation?

(a) Creditors

(b) Debtors

(c) Savings bank account holders

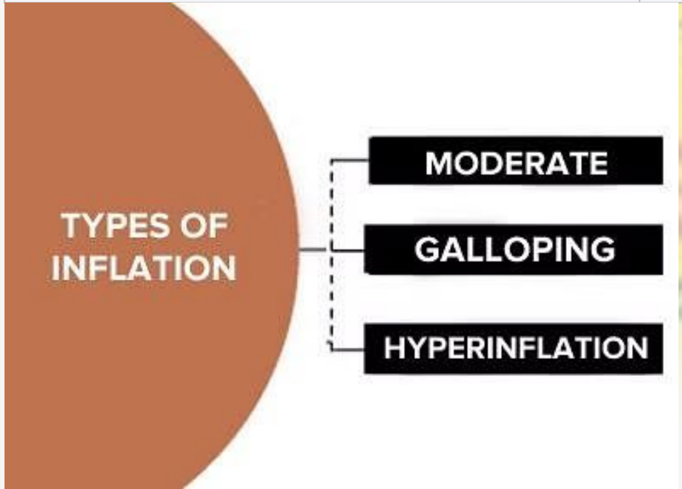
(d)Government pensioners

Effect of inflation

- Benefits the producers of goods because they can sell their products at higher prices.
- Benefits investors as they get higher returns.
- output rises, so does the demand for the various production factors, including labor
- Governments tax revenue improves
- borrower pays an interest rate that is lower than the inflation rate, he benefits from the process.
- Real-Income falls for groups with fixed income
- during inflation, the prices of export items rise as well.
- demand for the dollar increases
- reduces the purchasing power of households
- raises the prices of goods, raw materials, and factor services.

TYPES OF INFLATION

Based On Causation	Based On Speed	Others
• Demand Pull Inflation	• Creeping Inflation	• Skewflation
• Cost Push Inflation	• Walking Inflation	• Stagflation
• Monetary Inflation	• Running Inflation	
• Built In Inflation	• Galloping or Hyperinflation	
• Headline/Core Inflation		
• Profit Induced Inflation		
• Structural Inflation		



How Does Inflation Work?

Inflation represents the rate at which the cost of goods and services increase over a period of time.

Demand-Pull

When demand for goods/service exceeds production capacity.

Cost-Push

When production costs increase prices.

Built-In

When prices rise, wages rise too, in order to maintain living costs.

Demand Pull Inflation: Caused by **increased demand** for goods and services.

- Increase in Aggregate demand, driven by:
    - Expansionary Fiscal Policy (Government Expenditure).
    - Increased expenditure from Households and Firms.
    - Growing economy: Asset inflation, Low unemployment, Rising Incomes.
    - Population growth
    - Black Money
- Root Cause: Aggregate demand surpasses Aggregate Supply, indicating firms cannot meet the current demand, leading to shortages and inflation.
- Example: Outbreak of swine flu increases demand for breathing masks, but limited supply results in a manifold price rise, illustrating the demand pull inflation mechanism.
- **Effects:**

➢ Shortage of goods

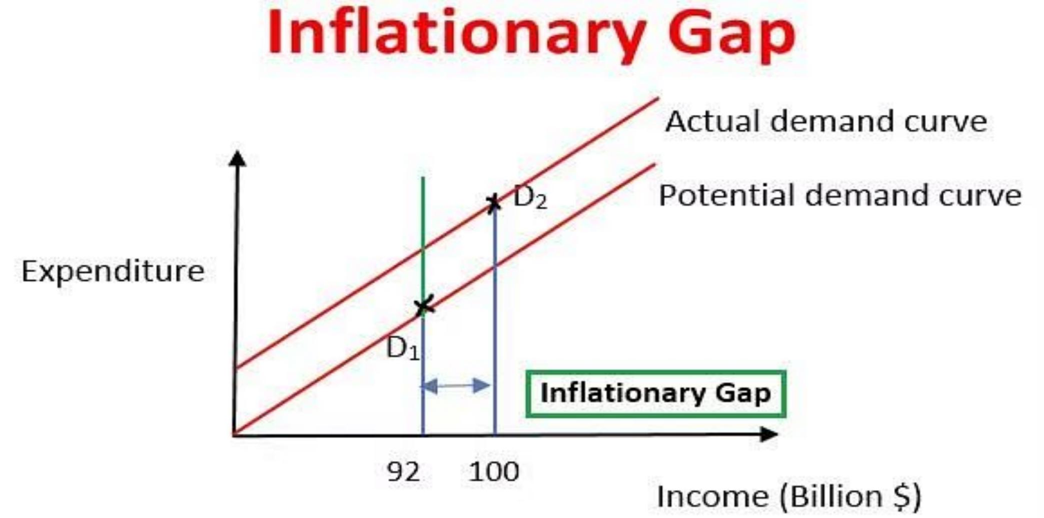
➢ Rising prices,

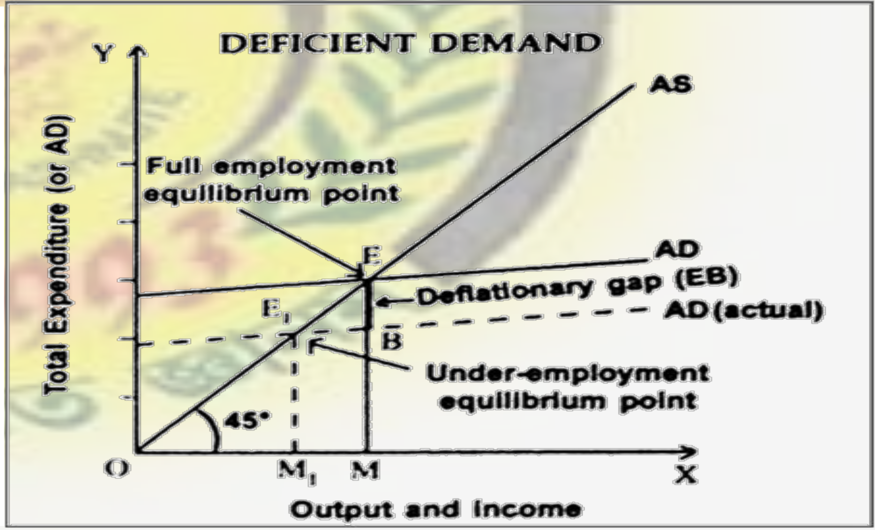
➢ Higher cost of living.

➢ Depreciation of rupee and Increase in Forex reserve.

Macro-level Understanding:

- Full Employment Level:
  - Economic state where all available resources are fully utilized, and no further improvement is possible.
  - Implies minimal unemployment, stable prices, full resource utilization, and no shortages in the economy.
- Inflationary Gap: *Arises when Aggregate demand exceeds Aggregate Supply at the full employment level.*
- Deflationary Gap: *Arises when Aggregate demand falls short of Aggregate Supply at the full employment level.*
- BASE EFFECT– The impact of the last year's inflation over the corresponding rise in the current inflation. The base can make inflation high or low, even if prices are the same in the period.





Cost-Push Inflation: Caused by **increased production costs.**

- **Causes:** Higher input prices, hoarding, supply chain issues, taxes, currency depreciation.
- **Cost-Push:** Infrastructure bottlenecks, rising minimum support prices, international price hikes.
- **Effects:** Reduced supply, rising prices, lower National Income.

Built-in Inflation: Arises from rising **wage demands** leading to increased production costs.

Note: Cost-push inflation is generally considered more harmful as it reduces National Income.

Types of Cost Push Inflation:

Wage Push Inflation:

- Cause: Employees demand unjustifiable wage increases, leading to higher production costs.
- Scenario: Occurs during high growth periods when workers anticipate wage hikes due to the rising cost of living.

Profit Push Inflation:

- Cause: Firms increase profit margins, charging higher prices for products.
- Scenario: Common when few producers dominate the market; e.g., OPEC's oil price increase in the 1970s.

Raw Material Push Inflation (Supply Shock):

- Cause: Rise in essential raw material prices (e.g., crude oil) disrupts the supply chain, increasing production costs.
- Example: Global crude oil price increase affecting India's economy, leading to rising costs & product prices.

Q. The supply-side economics lays greater emphasis on the point of view of:

(a) producer (b) global economy

(c) consumer (d) middleman

Q. A deflator is a technique of

(a) Adjusting for changes in price level

(b) Adjusting for change in commodity

(c) Accounting for decline of-GNP

(d) Accounting for higher increase of GNP

Cost Push Inflation Process:

1. Trigger: External shock (e.g., geopolitical events) raises raw material costs, impacting production.
2. Response: Manufacturers raise product prices to compensate for increased production costs (Raw Material Push).
3. Secondary Response: Consumers, anticipating future price rises, demand higher wages (Wage Push).
4. Outcome: Dual impact on prices and output levels; known as stagflation, resulting in falling growth and employment.

MONETARY INFLATION: RBI printing more and more money (deficit financing) can cause inflation. Monetary inflation is a sustained increase in the money supply of a country (or currency area).

STRUCTURAL INFLATION: Due to the weak structure of the institutions and markets in the economies, mostly the developing and low-income ones. Example- Artificial shortage of foods/ goods due to hoarding and Poor agriculture produce due to poor monsoons, inadequate irrigation facilities etc.

PROFIT INDUCED INFLATION: If the producers, due to their monopoly position, tend to mark-up their profit margin, it will lead to profit-induced inflation.

Aspect	Core Inflation	Headline Inflation
Definition	Change in costs of goods and services excluding food and energy sectors	Total inflation including food, fuel, and all other commodities
Measurement Index	Often calculated using Consumer Price Index (CPI)	Rate expressed in Wholesale Price Index (WPI)
Long-term Trend Reflection	Reflects long-term inflationary trends in the economy	May not accurately represent long-term trends due to sector-specific spikes
Volatility Consideration	Excludes volatile food and energy prices	Includes prices of volatile commodities like food and energy
Index Exclusion	No direct index for core inflation measurement, derived from CPI	Directly measured by WPI or CPI

Q. Assume that the consumer price index (1970 = 100) is at present 500. This means that

(a) Prices of all goods and commodities have increased five times.

(b) Prices of all consumer goods have increased five times.

(c) Prices of all items in a specified list have increased by 400%.

(d)Prices have increased and the weighted mean price increase for specified items is 400%

Measurement of inflation

- Inflation is measured using CPI.
- The percentage change in this index over a period of time gives the amount of inflation over that specific period, i.e. the increase in prices of a representative basket of goods consumed.
- Therefore,there is 500₹-100₹ increase in price that is Prices have increased and the weighted mean price increase for specified items is 400%.

Consumer price index (CPI)

- The Consumer Price Index (CPI) is a measure of the aggregate price level in an economy.
- The CPI consists of a bundle of commonly purchased goods and services.
- Changes in measured CPI track changes in prices over time.
- The CPI is divided into eight categories: education, communication, transportation, recreation, clothes, foods and beverages, housing, and medical care.
- The CPI is published by the National Statistical Office (NSO) under the Ministry of Statistics and Program Implementation.
- The CPI uses a base year set at 2011-2012.

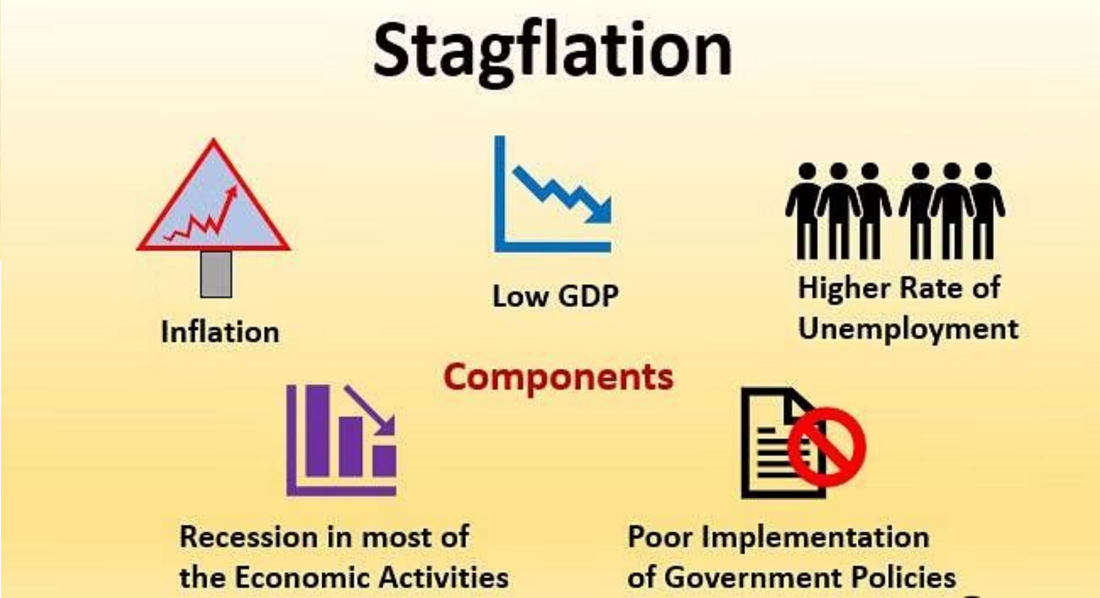
$$\text{onsumer price index} = \frac{\text{market basket of desired year}}{\text{market basket of base year}} \times 100$$

Extreme Scenarios:

SKEWFLATION (Skew + flation): It is the skewed rise in the price of some items while remaining item prices remain the same. E.g. Seasonal rise in the price of onions.

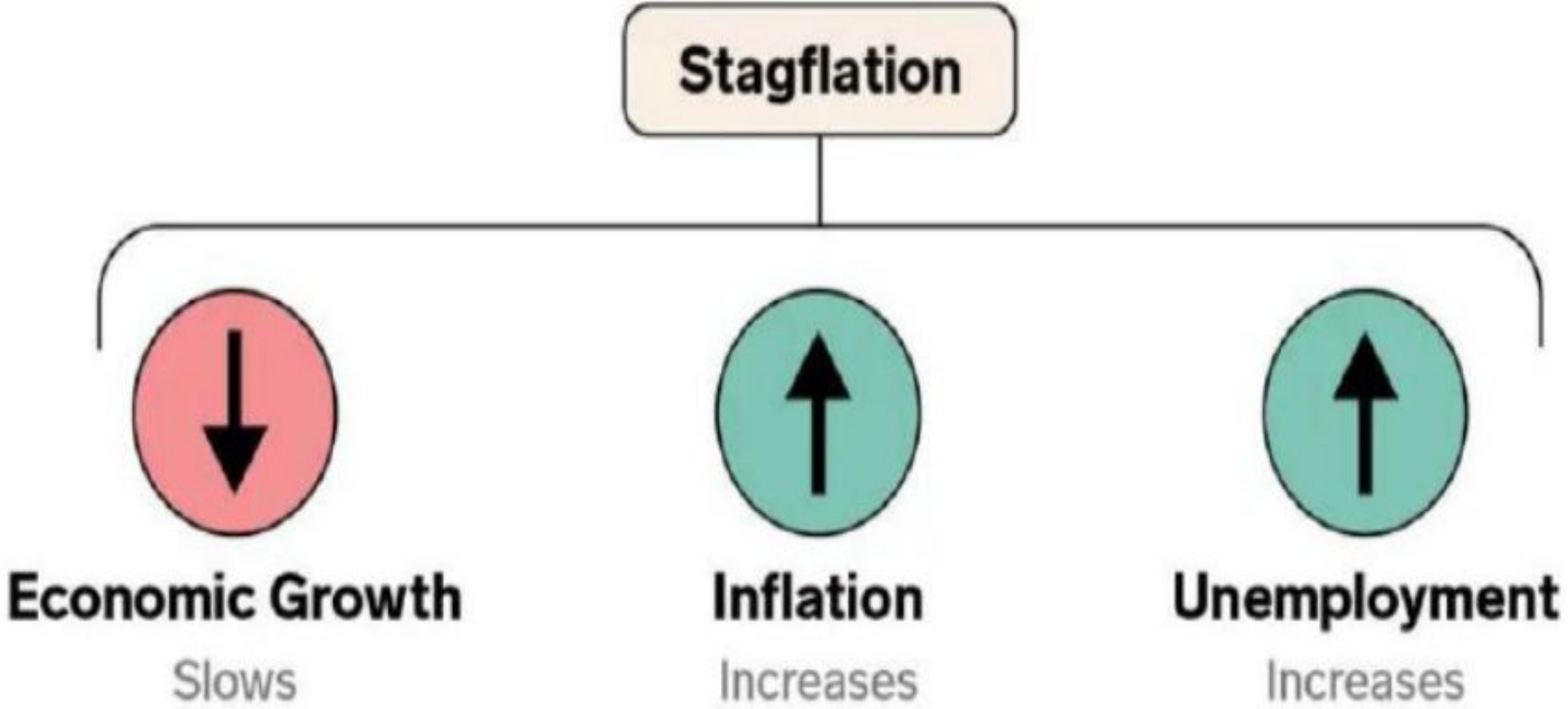
Stagflation:

- Characteristic: Simultaneous rise in prices and fall in overall output and employment.
- Difference: Unlike Demand Pull Inflation, output levels decrease along with rising prices, making it more concerning.



Q. Stagflation refers to
(a) Constant rate of inflation
(b) Low inflation with high recession
(c) High inflation with low recession
(d) Stagnation and inflation

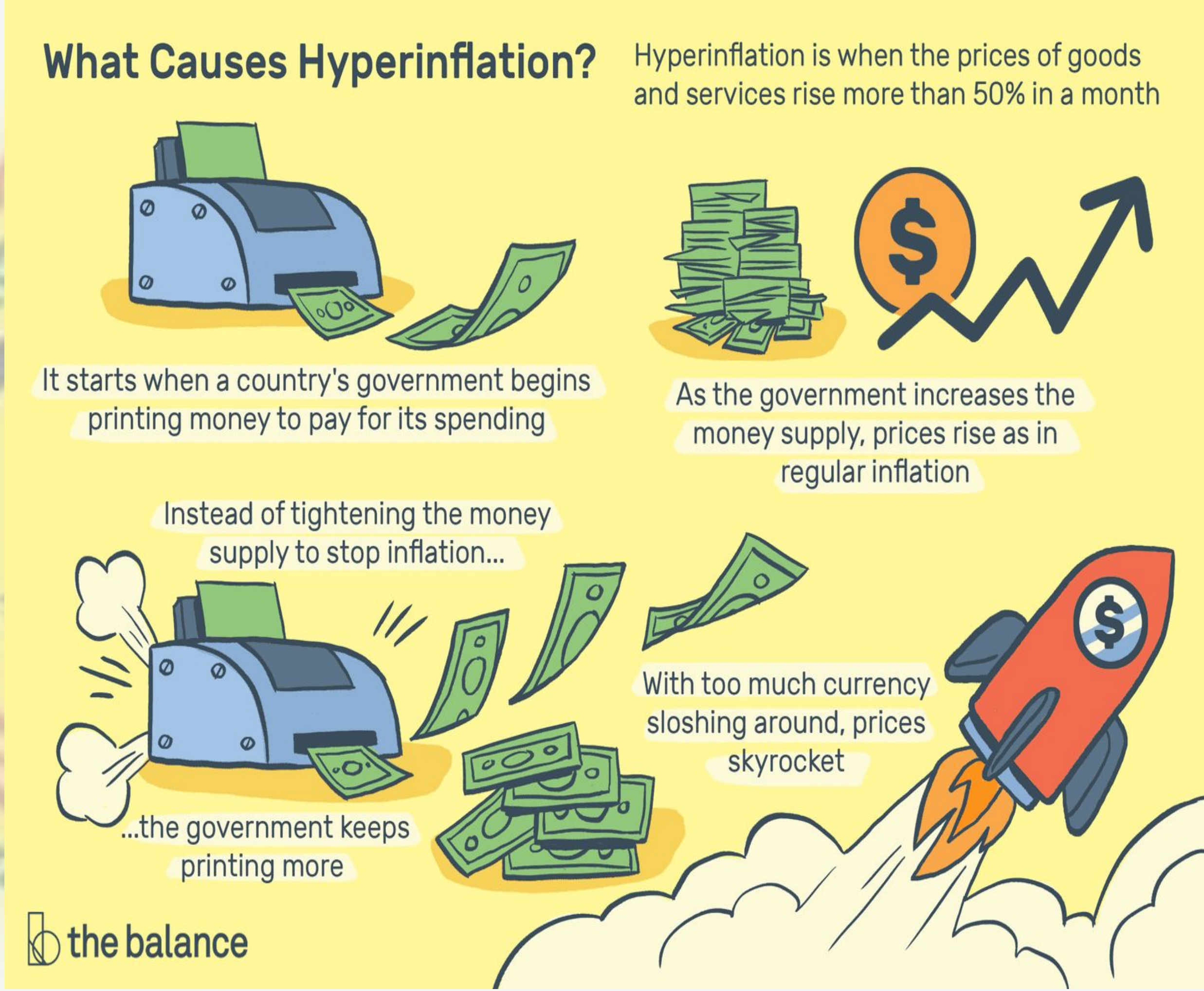
What causes stagflation?



REFLATION: Reflation is the act of stimulating the economy after a period of economic slowdown or contraction. The goal is to expand output, stimulate spending and curb the effects of deflation. Policies include tax cuts, infrastructure spending, increasing the money supply and lowering interest rates.

Hyperinflation:

- Characteristics: Extremely rapid inflation rate (50 to 300 times).
- Causes: Excessive currency issuance, wars, political instability, and widespread anticipation of future inflation.
- Effects: Currency devaluation, economic crisis, increased external debt, and severe decline in purchasing power.
- Note: Hyperinflation is driven by excessive currency issuance, wars, political instability, and widespread anticipation of future inflation, leading to a devastating economic crisis.



Understanding Price Movement:

- **Deflation:** Prices fall continuously, reducing purchasing power and potentially harming the economy.
- **Disinflation:** Inflation slows down, which is generally positive but can become deflation if not carefully managed.
- **Inflation:** Prices rise steadily, eroding purchasing power but potentially indicating a healthy economy.
- **Reflation:** Intentional measures to stimulate economic growth by increasing money supply or reducing taxes, aiming to reverse deflation or a slowdown.
- **Depression:** Severe and prolonged economic downturn with high unemployment and declining output.

Inflation by Speed

1. **Slow & Steady: Creeping Inflation (1-4%)**: Prices increase gradually, usually manageable for central banks.
2. **Moderate: Walking Inflation (2-10%)**: Inflation in single digits, but raises concerns for central banks.
3. **Concerning: Running Inflation (10-20%)**: Significant price increases, requiring action from authorities.
4. **Dangerous: Galloping Inflation (20%-1000%)**: Rapidly rising prices, difficult to control, poses major economic threats.
5. **Extreme: Hyperinflation (1000%+)**: Extremely high inflation, often leading to currency collapse and economic crisis.

Inflation Targeting Explained:

What is it?

- A monetary policy where the central bank aims to maintain a specific inflation rate (usually around 2-4%).
- The Reserve Bank of India (RBI) uses inflation targeting to manage price stability and promote economic growth.

How does it work?

- The government sets an inflation target in consultation with the RBI.
- The RBI's Monetary Policy Committee (MPC) sets interest rates based on the target and economic conditions.
- The goal is to keep inflation within a tolerance band around the target.

Benefits:

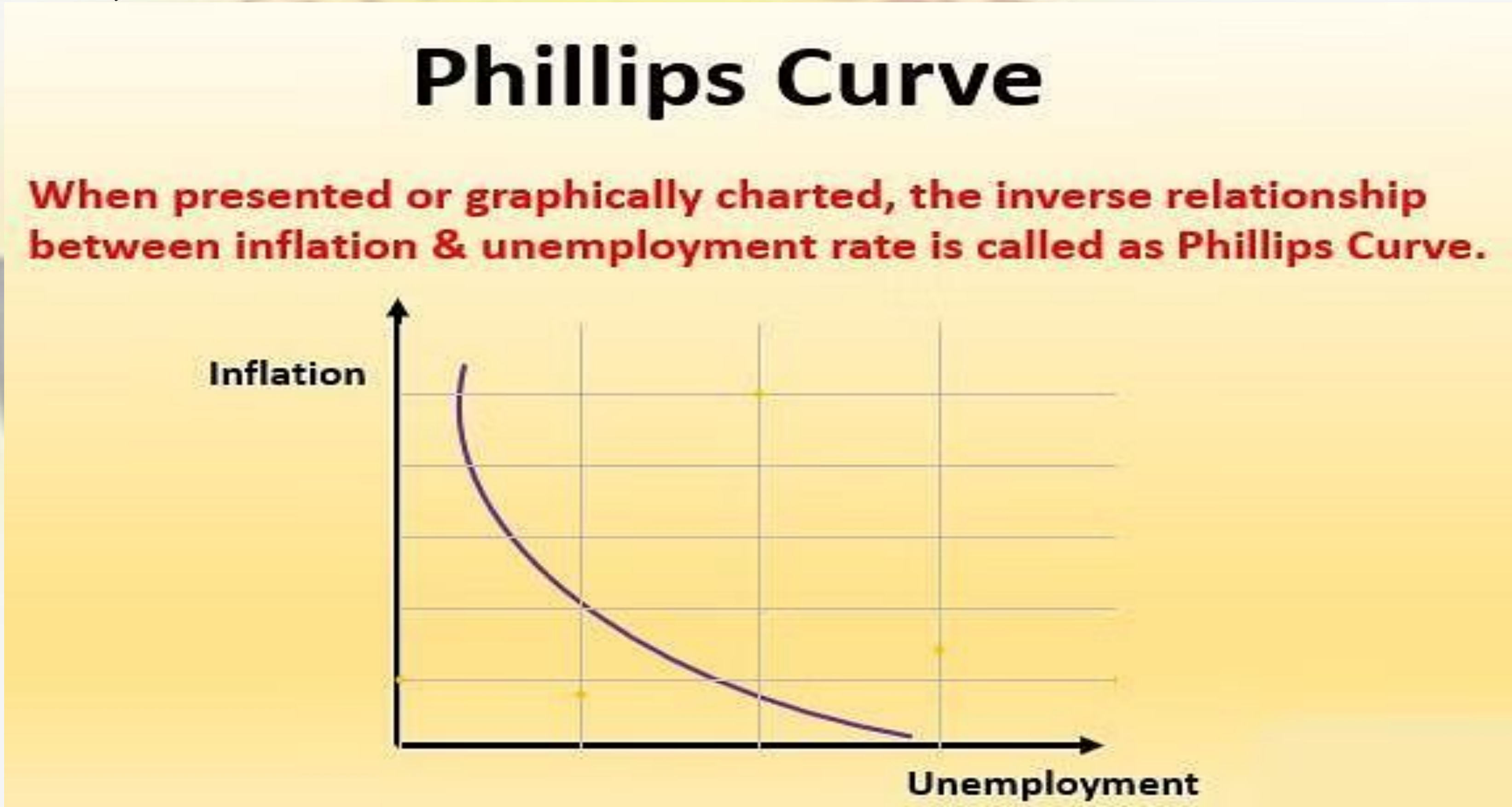
- Increases transparency and accountability.
- Helps stabilize inflation expectations.
- Promotes economic growth by creating a predictable environment.

Current Situation:

- India's inflation target is 4% (+/-2%) until March 2024.
- The MPC uses various tools, including interest rates, to achieve this target.

Key Economic Terms:

Phillips Curve: Relationship: Inverse relationship between unemployment and inflation (lower unemployment = higher inflation, and vice versa).



GDP Deflator/Implicit Price Deflator:

- **Measures:** Inflation for the entire economy (goods & services).
- **Formula:** (Nominal GDP / Real GDP) x 100

Meaning: Shows how much of GDP growth is due to price increases vs. actual production.**Producer Price Index (PPI):**

- **Measures:** Average change in prices of goods at the producer level.
- **Types:** Output (leaving production) and Input (entering production).

Laspeyres Index:

- **Uses:** Base year prices to calculate price changes (used in WPI, CPI, IIP).
- **Bias:** Overestimates inflation in periods of changing consumption patterns.

Paasche Index:

- **Uses:** Current year prices to calculate price changes.
- **Bias:** Underestimates inflation in periods of changing consumption patterns.

Fisher Index:

- **Combines:** Laspeyres and Paasche indices to address their biases.
- **Calculation:** Geometric mean of Laspeyres and Paasche indices.

Double-Edged Sword: Effects of Increasing Inflation

Benefits:

- **Debtor advantage:** Easier to repay loans as the real value of debt decreases.
- **Export boost:** Depreciation makes exports cheaper, potentially increasing demand.
- **Investment & employment:** Short-term rise due to increased economic activity.

Disadvantages:

- **Loss for lenders & fixed income earners:** Real value of savings and income declines.
- **Uncertainty & reduced investment:** Long-term investment dampened due to economic volatility.
- **Import burden:** Imported goods become more expensive.
- **Erosion of purchasing power:** Rupee buys less, impacting everyone's standard of living.
- **Wage-price spiral:** Wage increases chase inflation, further fueling it.
- **Reduced competitiveness:** Exports may eventually lose their edge due to rising production costs.

Combating Inflation: A Multi-Pronged Approach

Monetary Policy:

- **Increase interest rates:** Discourages borrowing and spending, reducing demand-pull inflation.
- **Open market operations:** Selling government bonds absorbs money from circulation, lowering liquidity.
- **Increase bank reserves:** Requires banks to hold more reserves, limiting lending and money supply.

Fiscal Policy:

- **Reduce government spending:** Lessens government demand for resources, reducing price pressures.
- **Increase taxes:** Raises government revenue and reduces disposable income, curbing spending.
- **Price control (short-term):** Sets temporary limits on specific goods to contain price spikes.

Other Measures:

- **Import controls:** Restricting imports can reduce competition and raise domestic prices, but can distort markets.
- **Export promotion:** Encouraging exports increases foreign exchange earnings and potentially reduces inflationary pressures.
- **Supply-side reforms:** Improving efficiency and productivity in key sectors can increase supply and moderate prices.
- **Wage moderation:** Voluntary agreements between employers and employees to limit wage increases can help stabilize prices.

Inflation Control: A Joint Effort

Controlling inflation requires a coordinated approach using both **fiscal policy** (government spending and taxes) and **monetary policy** (money supply and interest rates).

Monetary Policy (RBI):

- **Controls money supply:** RBI uses tools like interest rates and open market operations to manage the amount of money circulating in the economy.
- **Aims:** Maintain price stability, promote economic growth, and ensure financial stability.

Fiscal Policy (Government):

- **Manages government spending and taxes:** Adjusting these levers can influence aggregate demand and inflation.
- **Goals:** Achieve fiscal sustainability, manage public debt, and promote economic stability.

The Relationship:

- **Expansionary fiscal policy** (increased spending or tax cuts) can stimulate the economy but potentially fuel inflation.
- **Contractionary fiscal policy** (reduced spending or tax hikes) can cool inflation but may slow growth.
- **Monetary policy often complements fiscal policy:** If fiscal policy is expansionary, the RBI may tighten monetary policy by raising interest rates to curb inflation and vice versa.

Government Inflation Control Measures: Summary

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The Indian government proactively combats inflation through various steps, as highlighted in the Economic Survey:

Market Regulation:

- Cracking down on hoarding and black marketing through advisories and legal action.
- Regular price monitoring and intervention through committees and meetings.

Supply-Side Interventions:

- Higher minimum support prices (MSP) to incentivize food production.
- Price Stabilization Fund (PSF) to manage price volatility for key commodities.
- Building a 20 lakh ton buffer stock of pulses for market stabilization.
- Distributing pulses from buffer stock to various programs and forces.
- Imposing stock limits on onions and facilitating imports when needed.

Challenges:

- Striking the right balance between controlling inflation and promoting growth.
- Coordinating actions between government and the central bank.
- Managing short-term vs. long-term impacts of policies.

Additional Concepts:

- **Inflation tax (**Seigniorage)**:** The erosion of purchasing power due to inflation, acting like a hidden tax on cash holdings.
- **Inflation premium:** The advantage enjoyed by borrowers when inflation exceeds the interest rate on their loans.
- **Fiscal Stimulas:** In economics, stimulus refers to attempts to use monetary or fiscal policy (or stabilization policy in general) to stimulate the economy. Stimulus can also refer to monetary policies like lowering interest rates and quantitative easing. A stimulus is sometimes colloquially referred to as "priming the pump" or "pump priming".