

ENGINEERING ECONOMICS

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7wkifgm

WHAT IS ECONOMICS?

- **Economics** is a social science that studies the production, distribution, and consumption of goods and services.
- Alfred Marshall- “Economics is a study of man in the ordinary business of life. It enquires how he gets his income and how he uses it. Thus, it is on the one side, the study of wealth and on the other and more important side, a part of the study of man”.
- Economics focuses on the behavior and interactions of economic agents and how economies work.

PEOPLE RESPOND TO INCENTIVE

An incentive is something (the prospect of a punishment or reward) that induces a person to act in a certain manner

Primary School - To avoid parents coming late, what could have been done?

WHY IS IT IMPORTANT TO ANALYSE THE IMPACT OF INCENTIVE?

TAX

SUBSIDIES

RATIONALITY

PEOPLE FACE TRADE OFF

OPPORTUNITY COST

MARKETS ARE EFFICIENT

SYLLABUS

- **Ten Principles of Economics**
- **Thinking like an Economist**
- **Market Forces of Demand & Supply**
- **Elasticity and its Applications**
- Consumer, Producer and Efficiency of Markets
- Cost of Production
- Market Structure
- Measuring a nation's income
- Measuring the cost of living
- The Monetary System
- Public Economics-Externalities, Public Goods, and tax system
- Open Economy and basic concepts

TH

The Hindu

<https://www.thehindu.com> > ... > ICC World Cup

India-Aus World Cup Final match creates record peak ...

20 Nov 2023 — India-Aus WC Final sets record peak viewership of **5.9 cr** on Disney+Hotstar. Surpassing 5.3 cr peak concurrency in India-NZ semi-final.

bt

Business Today

<https://www.businesstoday.in> > LATEST > Trends

IPL 2023 records massive viewership of half a billion ...

8 Jun 2023 — **IPL 2023** registered 505 million **viewers** on television. The television broadcaster of the cricketing bonanza Indian Premiere League (**IPL**) **2023** ...

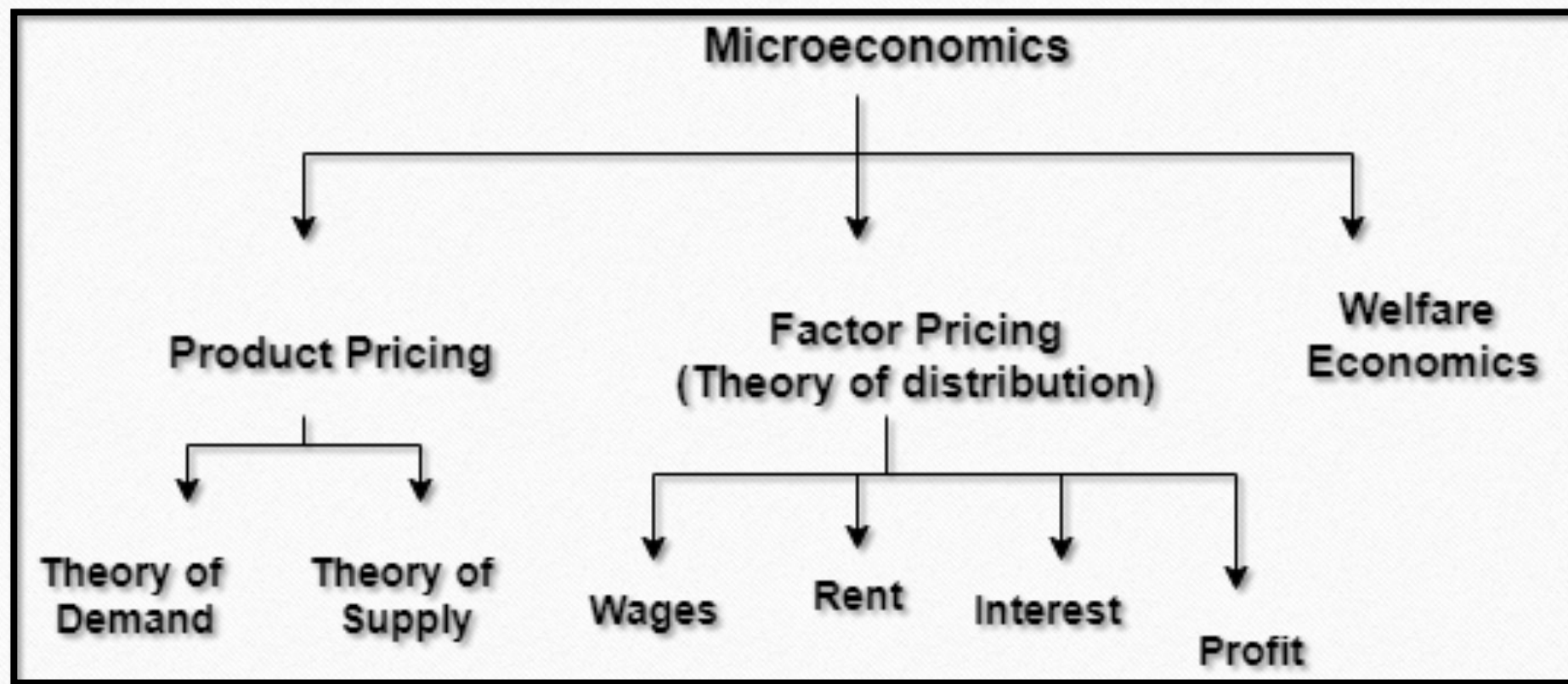
Quantitative Insights into Sports Media Consumption Pattern

...

The **Hockey India** League (HIL) attracts around 40 million **viewers** per year! How are Indians Watching their Favorite Sport. Infographic on how ...

MICROECONOMICS

- Microeconomics deals with analysis of small individual units of economics- Individual consumers, firms, industries, wages, income, etc-
- It is generally believed that microeconomics is not concerned with the study of economy as a whole- Untrue-Microeconomics examines the behaviour of individual units to determine the allocation of resources.
- Microeconomics answers 4 basic questions
 1. What goods shall be produced
 2. How to produce
 3. How to distribute
 4. Whether the production and distribution is efficient



DEMAND

- Quantity that the consumer is willing to purchase at different prices in a given time period.
- Demand for a commodity= **Desire** to purchase+ **Ability** of Buy
- Demand is determined by several factors like income of the consumer, taste & preferences, price of the good, price of related goods, etc.
- **Utility- Want satisfying power of a commodity**
- Market demand is the summation of individual demand functions.

LAW OF DEMAND

- Shows the relationship between quantity demanded and price.

$$Q_x = f(P_x, Y)$$

Q_x = quantity demanded of good X

P_x - Price of good X

Y = Other factors which are kept constant.

If price of a particular commodity increase, then its quantity demanded falls.

- Demand for a commodity also depends on other factors apart from price (Discussed Later)



<https://www.indiatoday.in> › india › story › lockdown-q... ⋮

Lockdown: Queues outside liquor shops amid confusion on ...

04-May-2020 — Long queues were seen outside **liquor** outlets in Mumbai and Pune on Monday, a day after the state government said **shops** of non-essential items, ...

<https://www.livemint.com> › companies › news › steep-c... ⋮

Steep cess on alcohol has affected sales: AB InBev - Mint

18-Jun-2020 — ... due to the **coronavirus lockdown**. Even as the restrictions were eased and **liquor stores opened**, consumers lapped up hard liquor for its ...

<https://www.business-standard.com> › ... › News ⋮

Liquor sales fall 60% in states with high Corona cess in May ...

02-Aug-2020 — States, which imposed more than 50 per cent **Covid-cess** on **liquor** after the resumption of retail trade post **lockdown**, witnessed an average 59 ...

EXCEPTIONS TO LAW OF DEMAND

- Veblen Effect- Goods having prestige value

- I. Some consumers measure the utility of a commodity on the basis of its price- Higher price= Higher utility.
- II. E.g. -?
- III. For these kind of goods quantity demanded will increase with the increase in price.
- IV. High-quality, premium goods

DETERMINANTS OF DEMAND

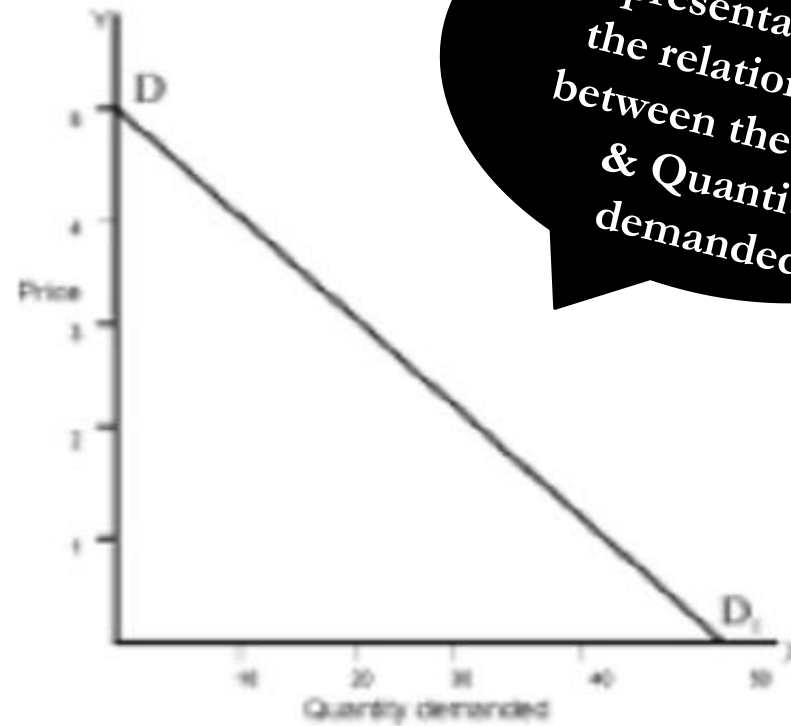
- Taste and Preferences of Consumers
- Income
- Price of related goods
- Number of consumers in the market
- **Consumers' expectation regarding future prices**

DEMAND SCHEDULE

**Table Demand
Schedule**

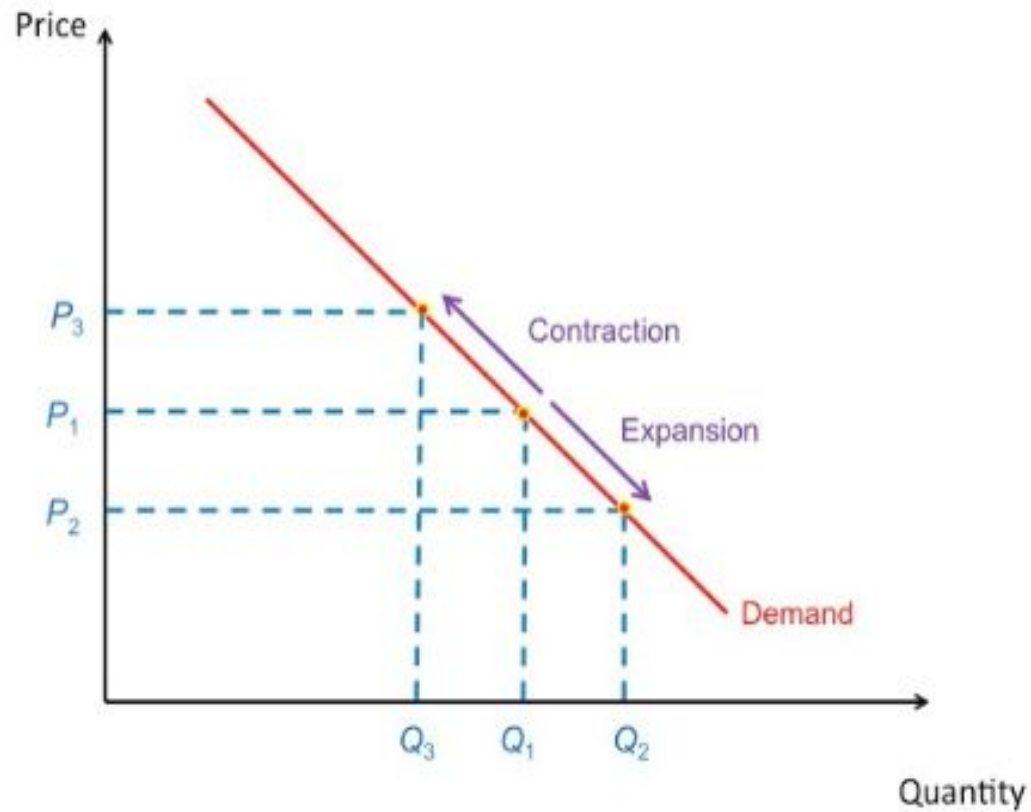
Price (Rs)	Quantity Demanded (Units)
5	10
4	20
3	30
2	40
1	50

**Figure Demand
Curve**



Graphical
representation of
the relationship
between the price
& Quantity
demanded

EXPANSION AND CONTRACTION IN DEMAND

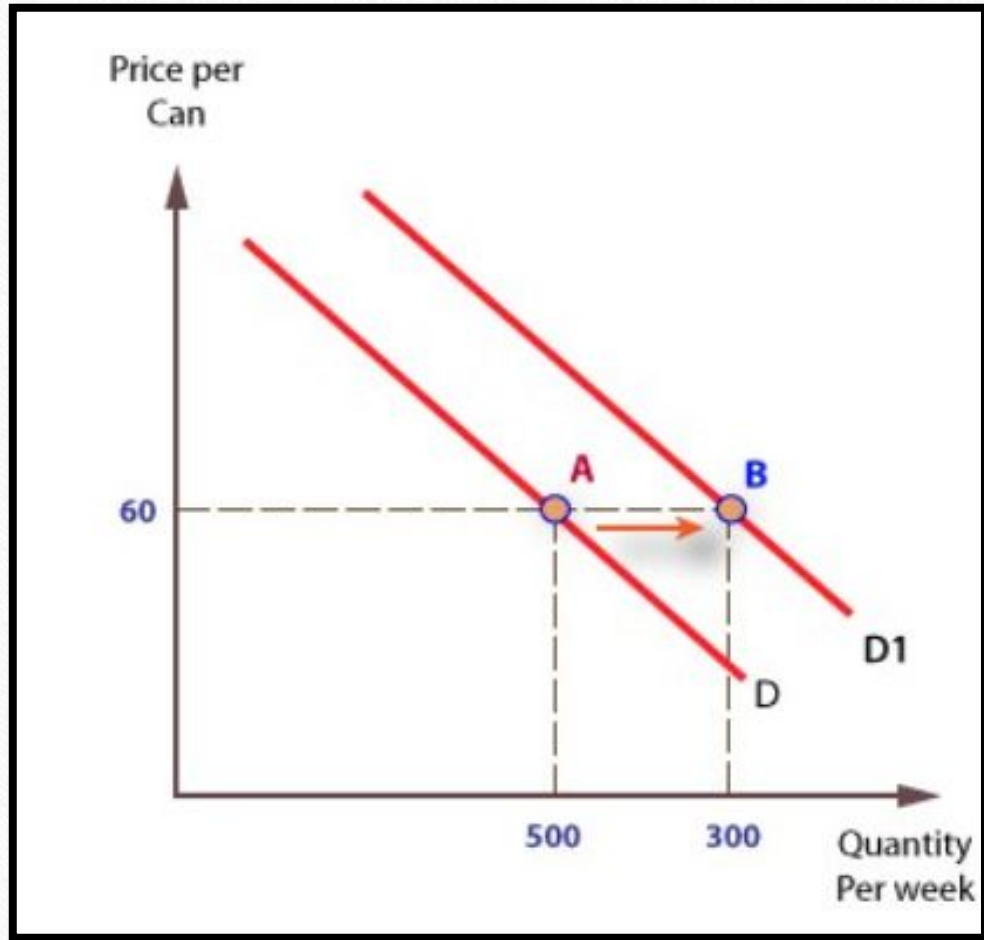


- If quantity demanded increases/decreases due to change in price expansion/contraction
- In case of expansion and contraction, only price effect is considered, **other factors** are assumed to be constant.

Demand Vs Quantity Demanded

- Demand represents entire schedule or curve
- Quantity demanded refers to the quantity an individual buys at a **particular price**.

INCREASE/DECREASE IN DEMAND



- When demand changes due to factors other than price, then the entire demand curve shifts.
- If there is an adverse change in factor influencing demand then it will lead to decrease in demand causing a leftward shift in the demand curve & vice-versa.
- The factors which cause shifts in demand are called shift factors.
- Generally demand is considered to be of linear form.
- $Q_d = a - bP_x$ ($Q_d = 12 - 6P_x$)
- a = Constant intercept term, b = Slope of Demand curve

ELASTICITY OF DEMAND

$$E = \left| \frac{\text{\% change in quantity demand}}{\text{\% change in price}} \right| = \left| \frac{p}{q} \cdot \frac{dq}{dp} \right|$$

- Law of demand indicates only the direction of change in quantity demanded
- **It is imperative to know the extent to which quantity demanded of a good will change in response to change in price.**
- Price elasticity represents the degree of responsiveness of quantity demanded of a good in response to change in its price.
- Cross elasticity is the degree of responsiveness of quantity demanded of a good to change in price of related good (Substitute/Complementary Goods)
- Income elasticity shows change in quantity demanded to change in Income.

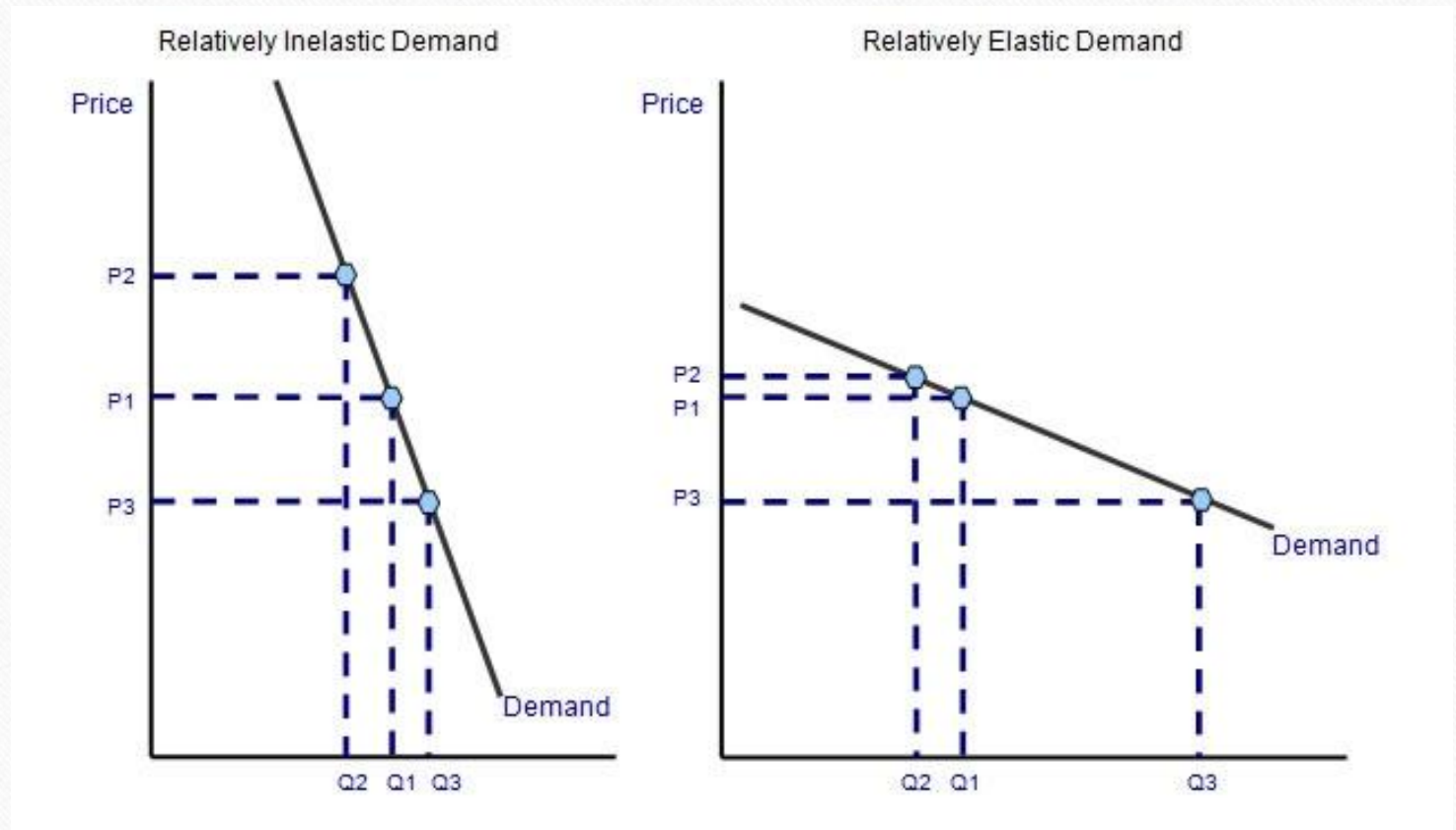
PRICE ELASTICITY

CROSS PRICE ELASTICITY

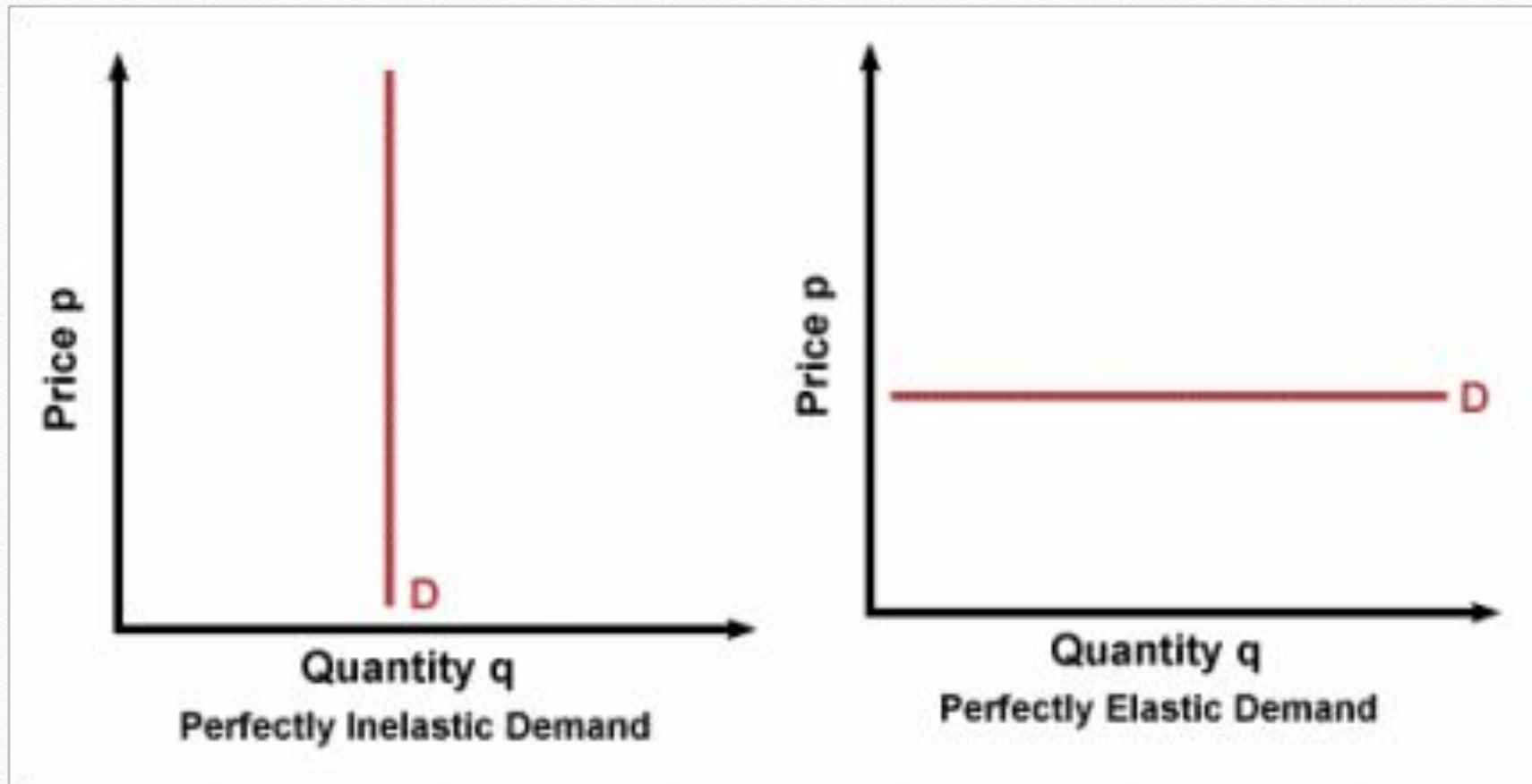
INCOME ELASTICITY

PRICE ELASTICITY OF DEMAND

- $E_p = \text{Percentage change in quantity demanded} / \text{Percentage change in price}$
- If $e_p > 1$ – Elastic
- $E_p < 1$ – Inelastic
- Unitary elastic- $e_p = 1$



PERFECTLY INELASTIC & ELASTIC DEMAND



DRAW DEMAND CURVE FOR PEPSI AND WATER

DETERMINANTS OF PRICE ELASTICITY OF DEMAND

Implication
for
producer?

- **Availability of substitutes-** If close substitutes of a commodity are available demand tends to be elastic. If prices increase, people tend to switch to other products over a period of time.
- **Proportion of consumer's income spent on a particular commodity-** Demand for salt is relatively inelastic- Why?

If consumers spend very less of their income on a particular product, then its demand will be relatively inelastic.

- **Number of uses of a commodity- Milk**

If prices are high, it will be used for only essential uses.

INCOME ELASTICITY

Income elasticity= Percentage change in purchases of a good/Percentage change in income

- Income elasticity can be 0 as it signifies that in response to change in income, quantity demanded does not change at all
- Positive income elasticity-
- Negative income elasticity-
- If income elasticity is greater than 1-
- If income elasticity is lesser than 1-

Nokia's failure was not solely due to its lack of innovation but also its shortcomings in leadership and guidance. These factors, combined with its inability to adapt to market demands and technological advancements, sealed the company's fate. 9 Jan 2024



StartupTalky

<https://startuptalky.com/reasons-why-nokia-failed>

Top 9 Reasons Why Nokia Failed | Nokia Failure Case Study



HOW CAN WE REVIVE THIS COMPANY WITH LIMITED RESOURCES?

INCOME ELASTICITY

Income elasticity= Percentage change in purchases of a good/Percentage change in income

- Income elasticity can be 0 as it signifies that in response to change in income, quantity demanded does not change at all
- Positive income elasticity- Normal goods
- Negative income elasticity- Inferior goods
- If income elasticity is greater than 1- Luxury
- If income elasticity is lesser than 1- Necessity

CROSS ELASTICITY OF DEMAND

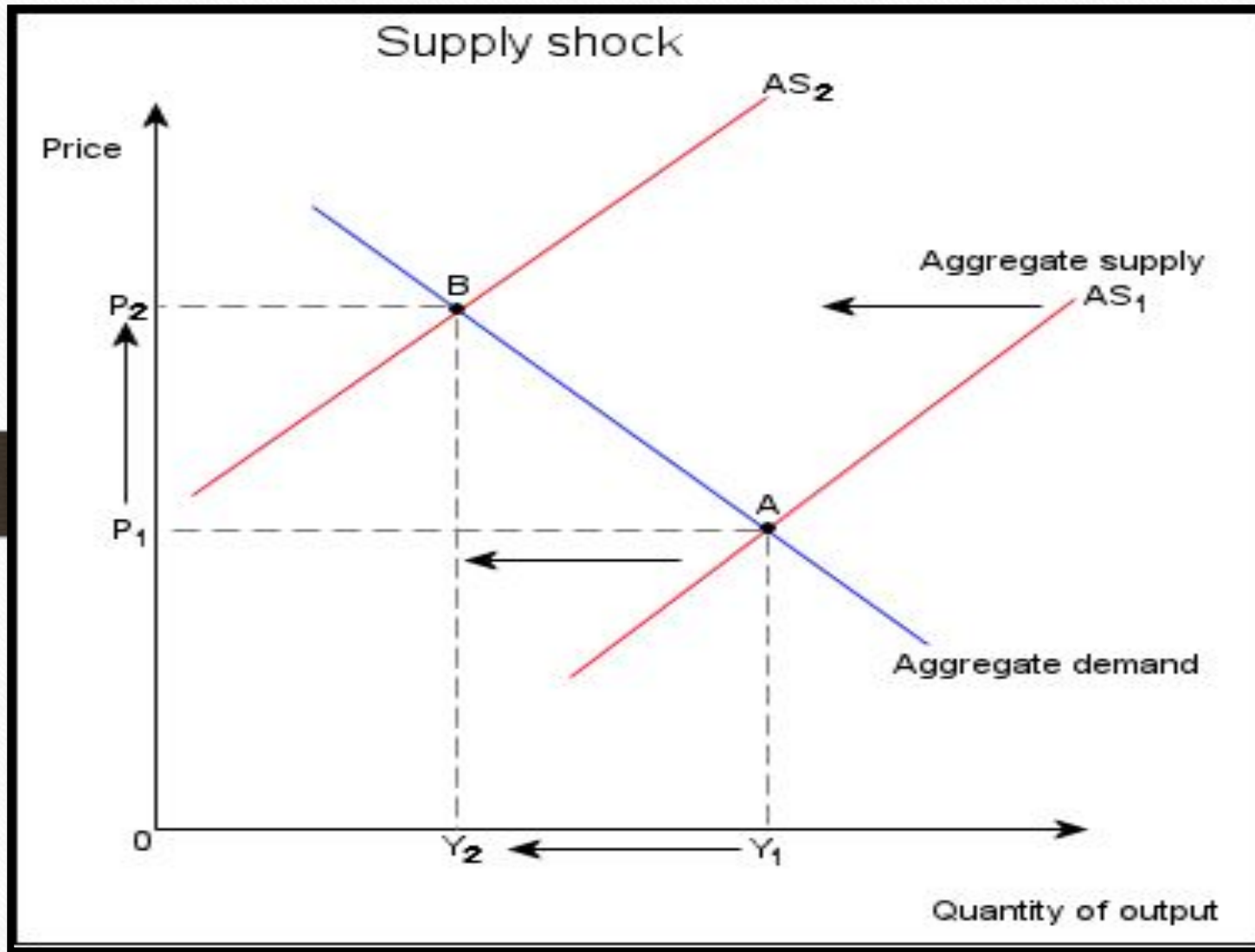
- Demand for many commodities are related to the price of other commodities- Important to estimate cross elasticity of demand
- Degree of responsiveness of demand for one good in response to the change in price of another good represents cross elasticity of demand.

Exy- % change in quantity demanded of X/% change in price of Y

- For complementary- Bread & Butter- Rise in price of one will lead to decrease in demand for another- **Cross elasticity will be negative**
- For substitutes cross elasticity of demand is positive as when price of one **increases**, demand for the other commodity also **increases**

APPLICATIONS OF ELASTICITY





- Determination of price and quantity through demand and supply.
- Equilibrium price & and quantity- Determined by the markets without external intervention
- **If supply reduces, supply curve shifts leftwards**
- **This results in an increase in price and quantity**

B. RICH - HEDGEYE



NOW, TRY
SAYING,
"LET THE
MARKETS
WORK,"
WITH A
STRAIGHT
FACE.

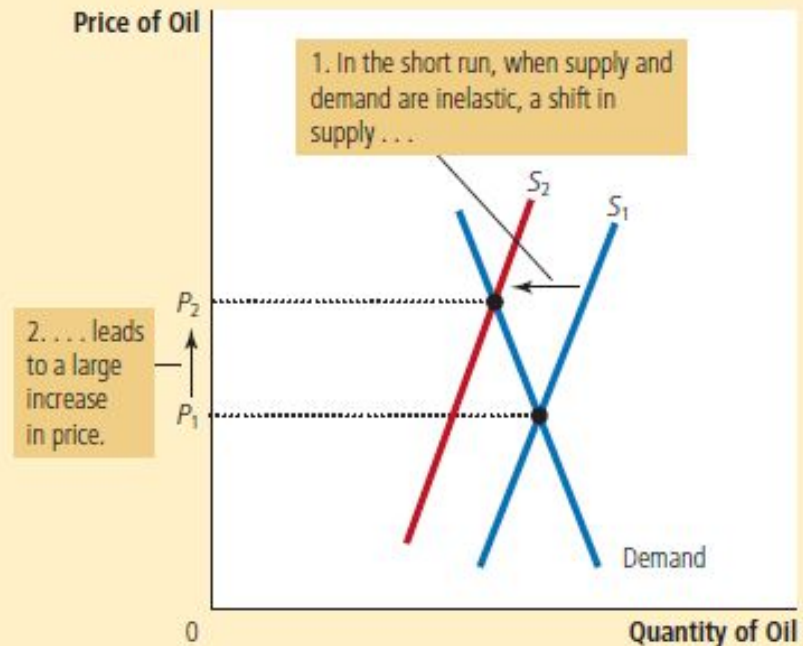
WHY DID OPEC FAIL TO KEEP THE PRICE HIGH ?

When the supply of oil falls, the response depends on the time horizon. In the short run, supply and demand are relatively inelastic, as in panel (a). Thus, when the supply curve shifts from S_1 to S_2 , the price rises substantially. By contrast, in the long run, supply and demand are relatively elastic, as in panel (b). In this case, the same size shift in the supply curve (S_1 to S_2) causes a smaller increase in the price.

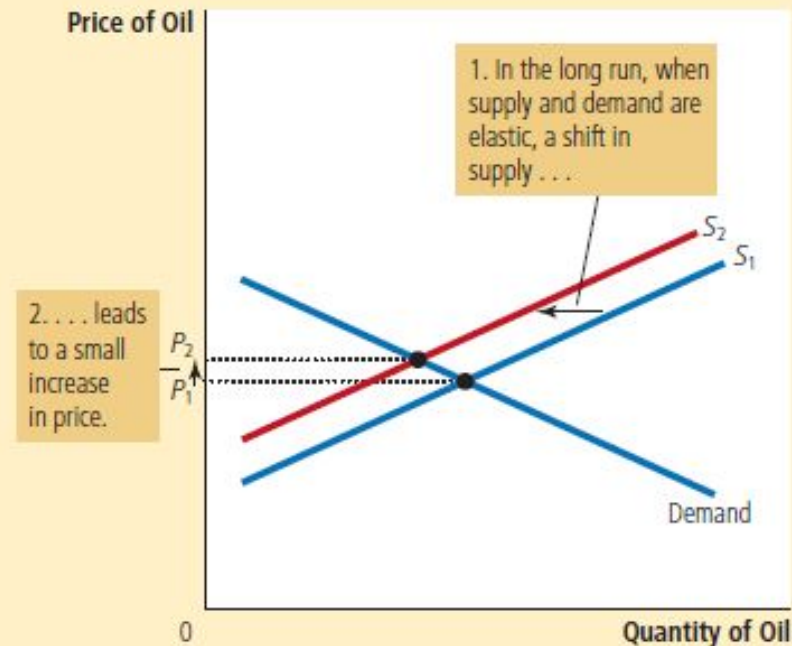
FIGURE 8

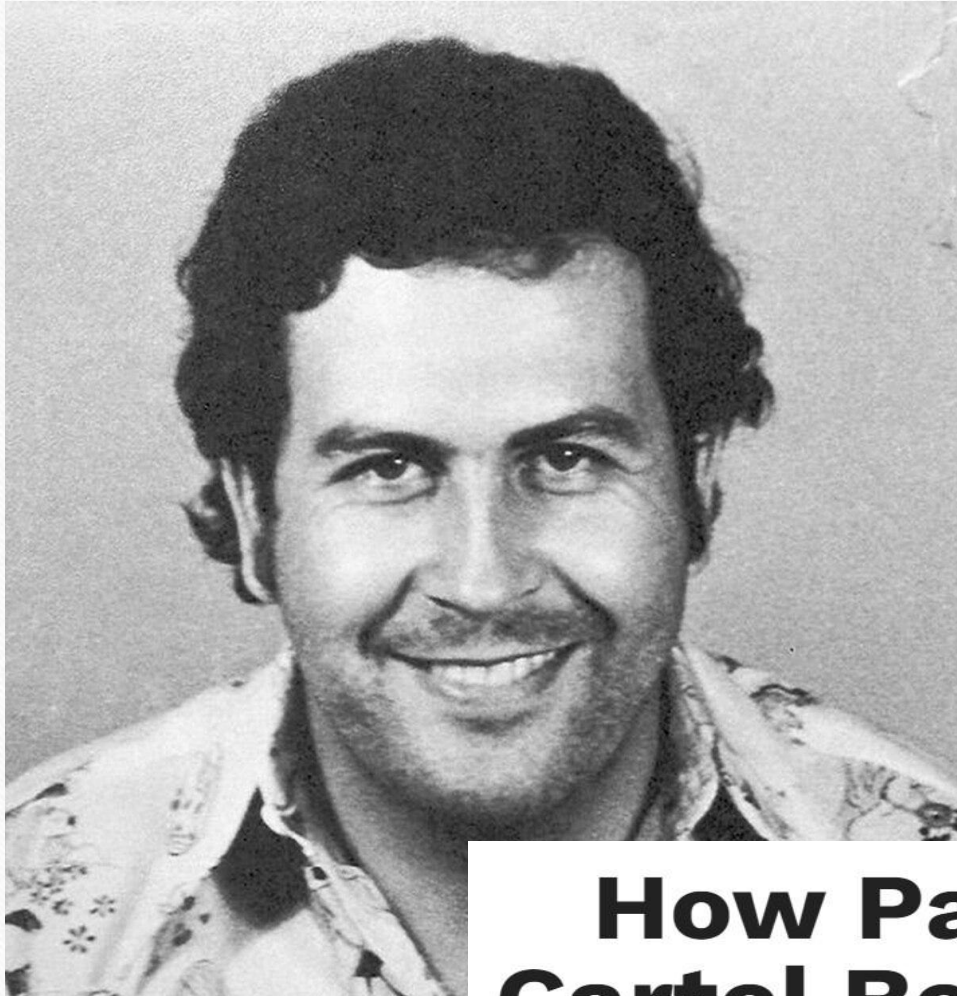
A Reduction in Supply in the World Market for Oil

(a) The Oil Market in the Short Run



(b) The Oil Market in the Long Run





HOW TO REDUCE DRUG CONSUMPTION

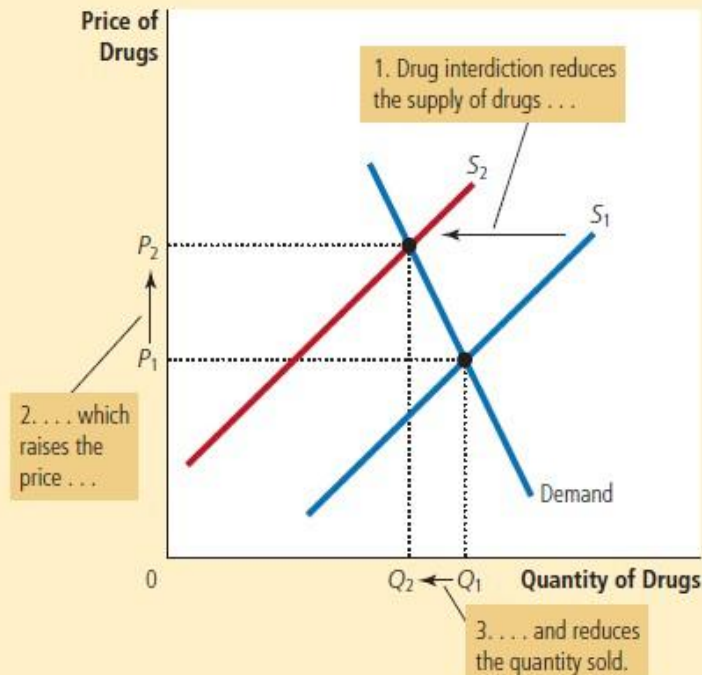
**How Pablo Escobar's Medellín
Cartel Became The Most Ruthless
In History**

FIGURE 9

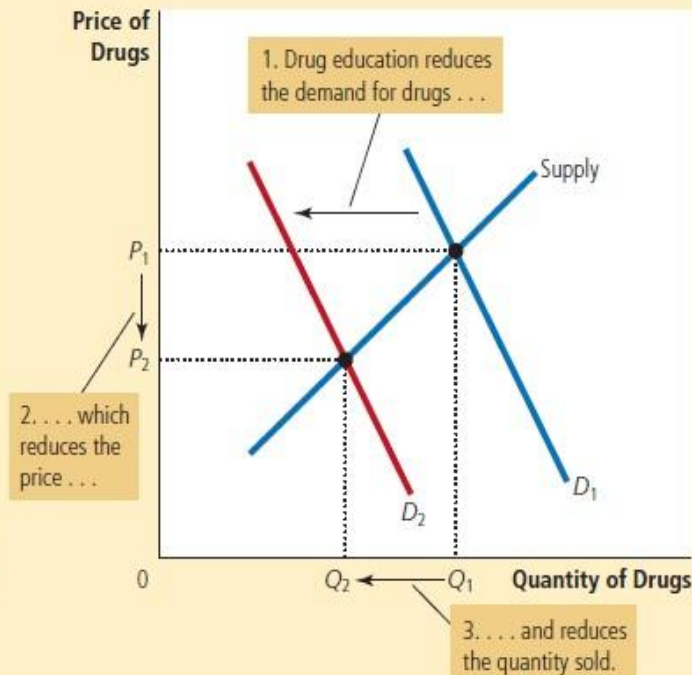
Policies to Reduce the Use of Illegal Drugs

Drug interdiction reduces the supply of drugs from S_1 to S_2 , as in panel (a). If the demand for drugs is inelastic, then the total amount paid by drug users rises, even as the amount of drug use falls. By contrast, drug education reduces the demand for drugs from D_1 to D_2 , as in panel (b). Because both price and quantity fall, the amount paid by drug users falls.

(a) Drug Interdiction



(b) Drug Education



Is the demand for drugs inelastic?

Policy intervention is needed to reduce consumption.

Farmers dump tomatoes, onions on highways as supply overtakes demand

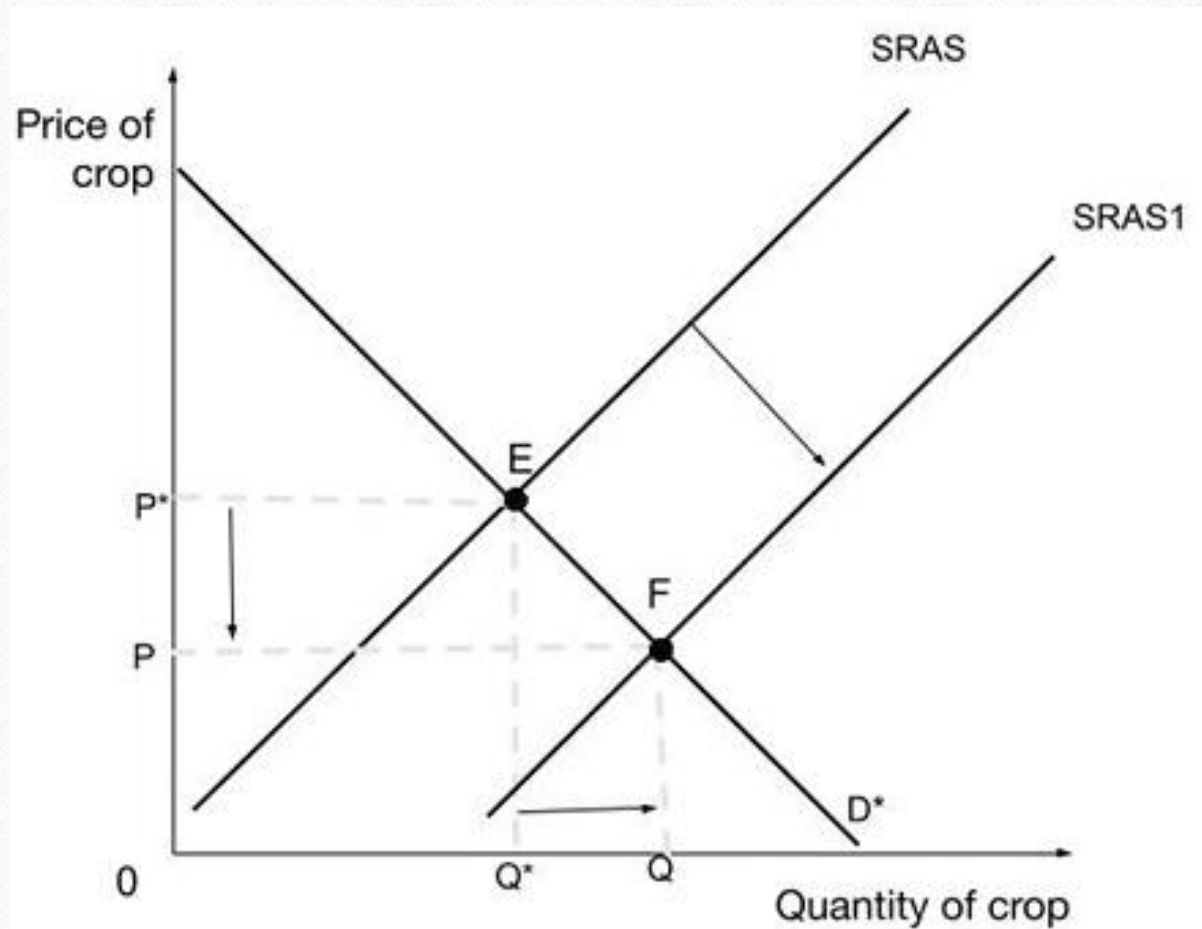
In India's largest wholesale market, prices crash even as consumers pay ten times more in retail; farmers demand compensation from govt

News / India News / Tomatoes at ₹ 2/kg, farmers dump stock

Tomatoes at ₹2/kg, farmers dump stock

ARE MARKETS REALLY EFFICIENT?

BUMPER HARVEST- EXAMPLE



SHOULD SOMETHING BE DONE ABOUT THIS?

- Due to bumper harvest, supply increase
- This leads to a rightward shift in supply curve
- Price Falls as demand does not rise much.

Many times, due to this input cost is also not recovered.

PRICE CEILING AND PRICE FLOOR

PRICE CEILING

A price ceiling is a type of price control, usually government-mandated, that sets the maximum amount a seller can charge for a good or service.

PRICE FLOOR

A price floor is the lowest legal price that can be paid for a good or service in a market

Governments usually set price floors to ensure that the market price of a commodity doesn't fall below a level that would threaten the financial existence of producers

MSP


 The Indian Express

Karnataka govt fixes fares for Ola, Uber and other taxis

The Karnataka Transport Department has announced uniform cab fares for app-cab aggregators like Ola and Uber, along with other non-app-based...

2 days ago



 Deccan Herald

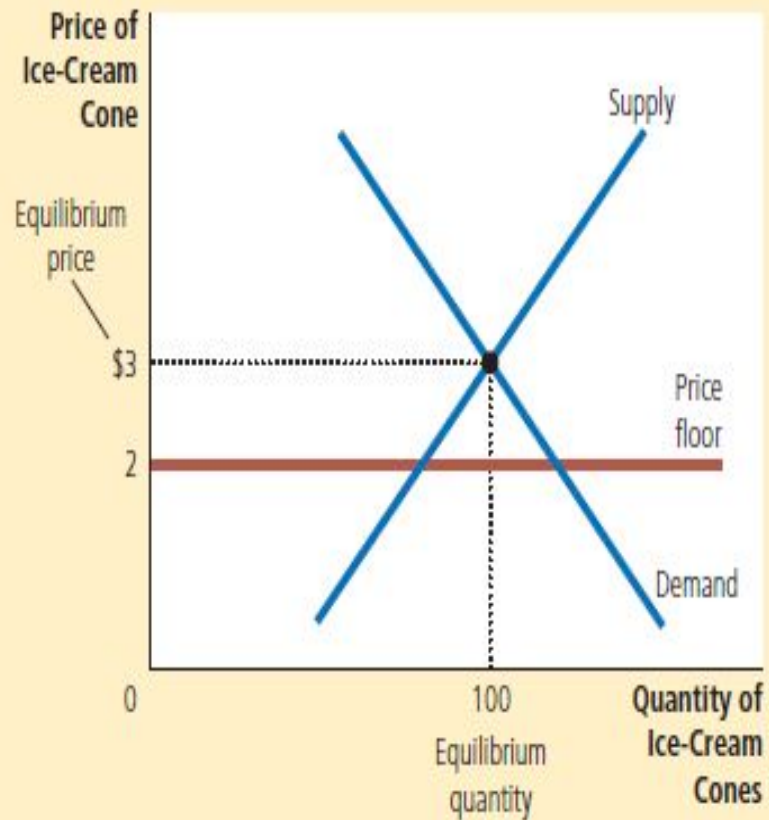
In a first, Karnataka brings in uniform fares for all cabs

Bengaluru, Feb 4 (PTI) City taxis and those operating through app-based aggregators like Uber and Ola will now have to follow the new fare...

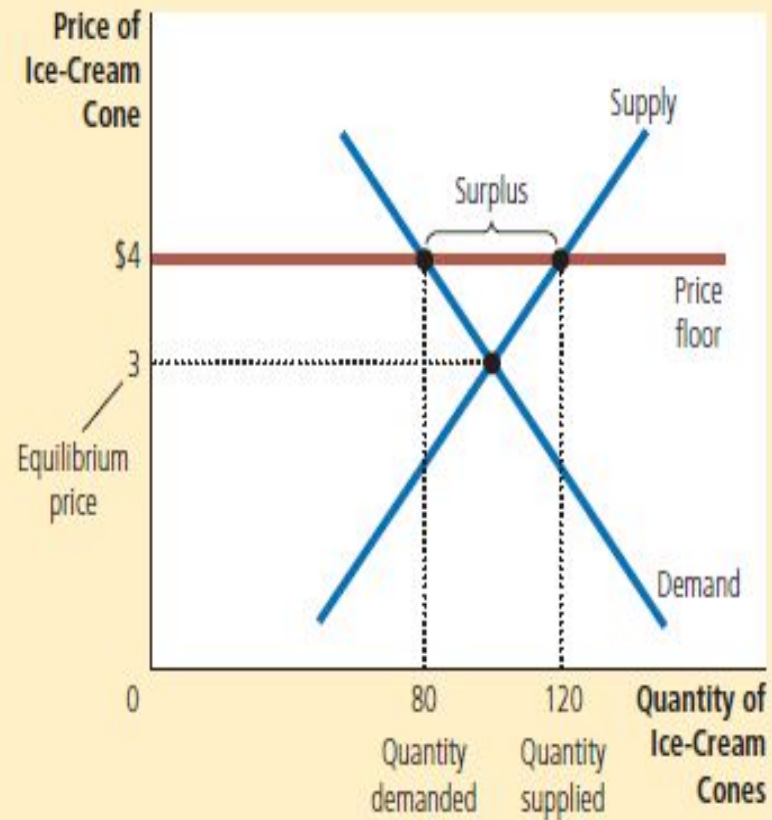
2 days ago



(a) A Price Floor That Is Not Binding



(b) A Price Floor That Is Binding



Price Floor- Binding and Non-Binding

Minimum price for a particular product.

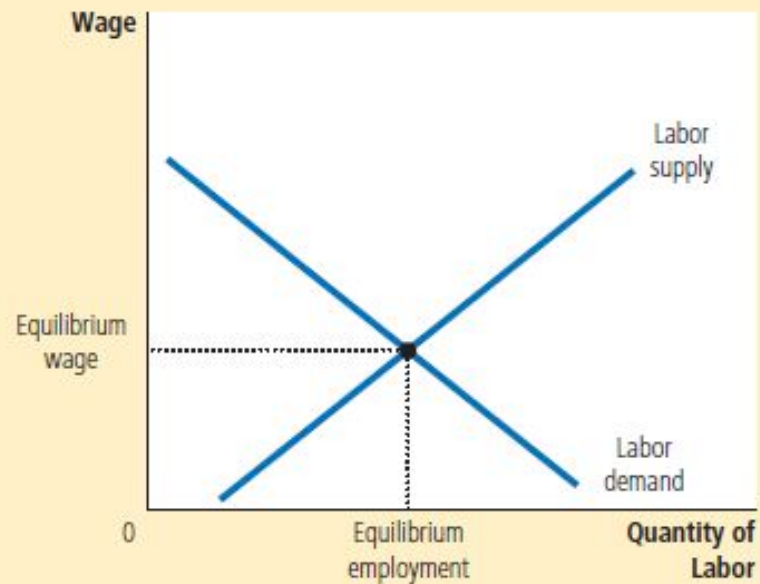
ARE MINIMUM WAGE LAWS NECESSARY?

FIGURE 5

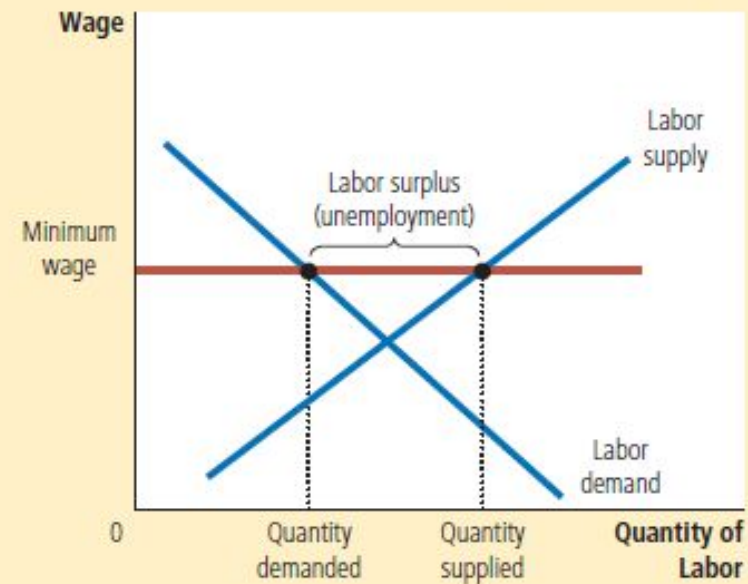
How the Minimum Wage Affects the Labor Market

Panel (a) shows a labor market in which the wage adjusts to balance labor supply and labor demand. Panel (b) shows the impact of a binding minimum wage. Because the minimum wage is a price floor, it causes a surplus: The quantity of labor supplied exceeds the quantity demanded. The result is unemployment.

(a) A Free Labor Market



(b) A Labor Market with a Binding Minimum Wage



COSTS OF PRODUCTION

TOTAL REVENUE

The amount a firm receives for the sale of its output



TOTAL COST

the market value of the inputs a firm uses in production



PROFIT

ET The Economic Times

Byju's seeks \$200 million in rights issue at 99% valuation cut

Once pegged as India's most-valued startup, at \$22 billion, edtech firm Byju's is bracing itself for a 99% cut in its valuation as part of a...

1 week ago



mint

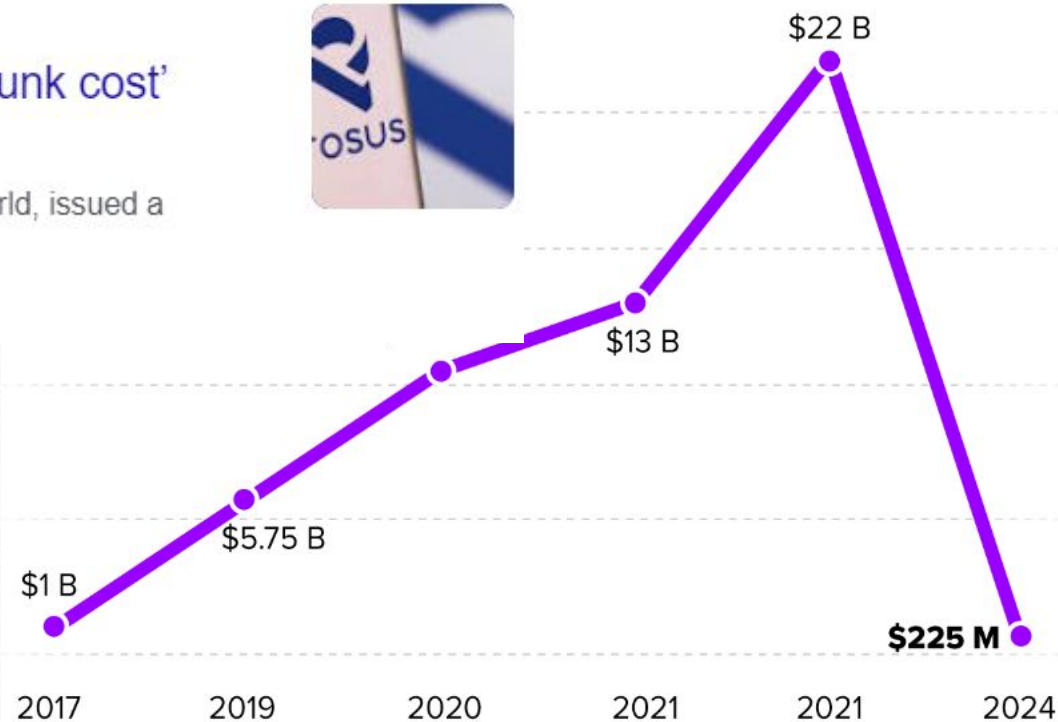
Venture capitalists find it tough to escape the 'sunk cost' fallacy | Mint

Last week Prosus, one of the largest technology investors in the world, issued a statement on Byju's. It said that since it first invested...

31 Jul 2023

SUNK COST FALLACY

Byju's maths: the rise and fall in valuation



Source: ET Research

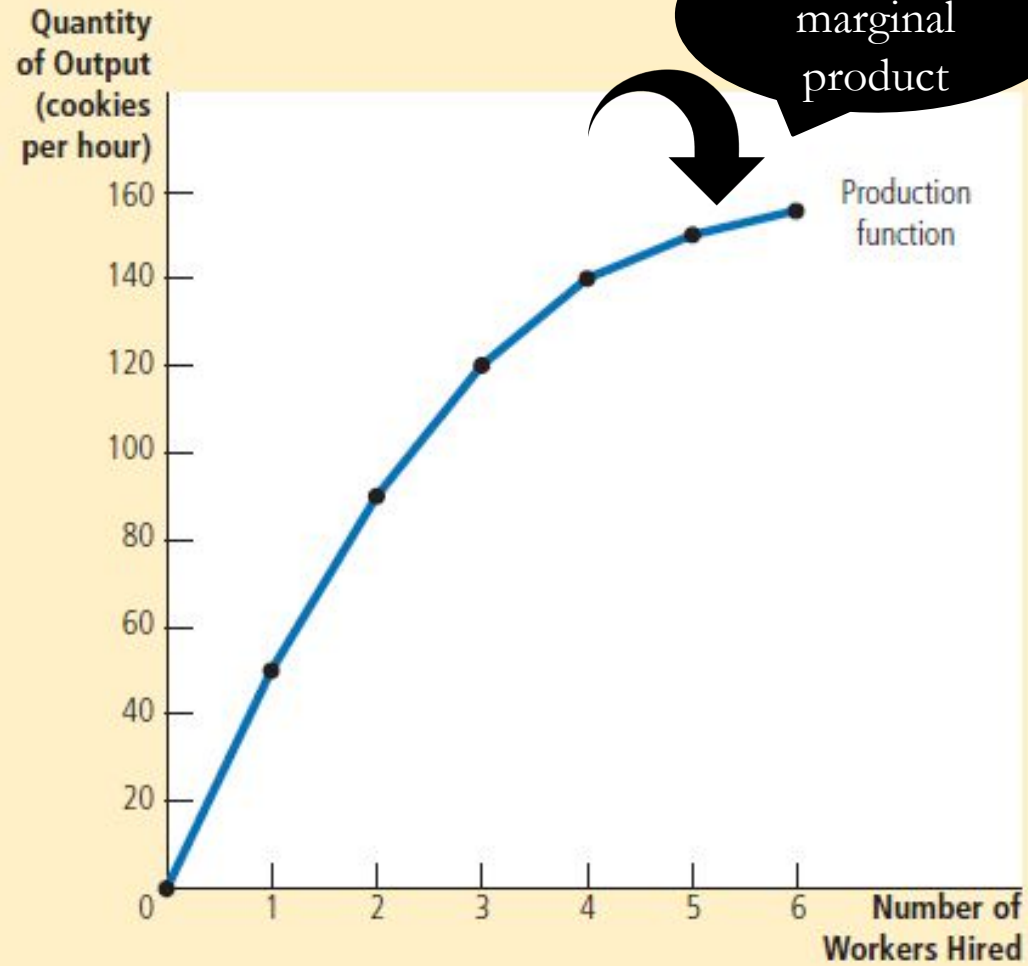
PRODUCTION FUNCTION

- The relationship between the quantity of inputs used to make a good and the quantity of output of that good.

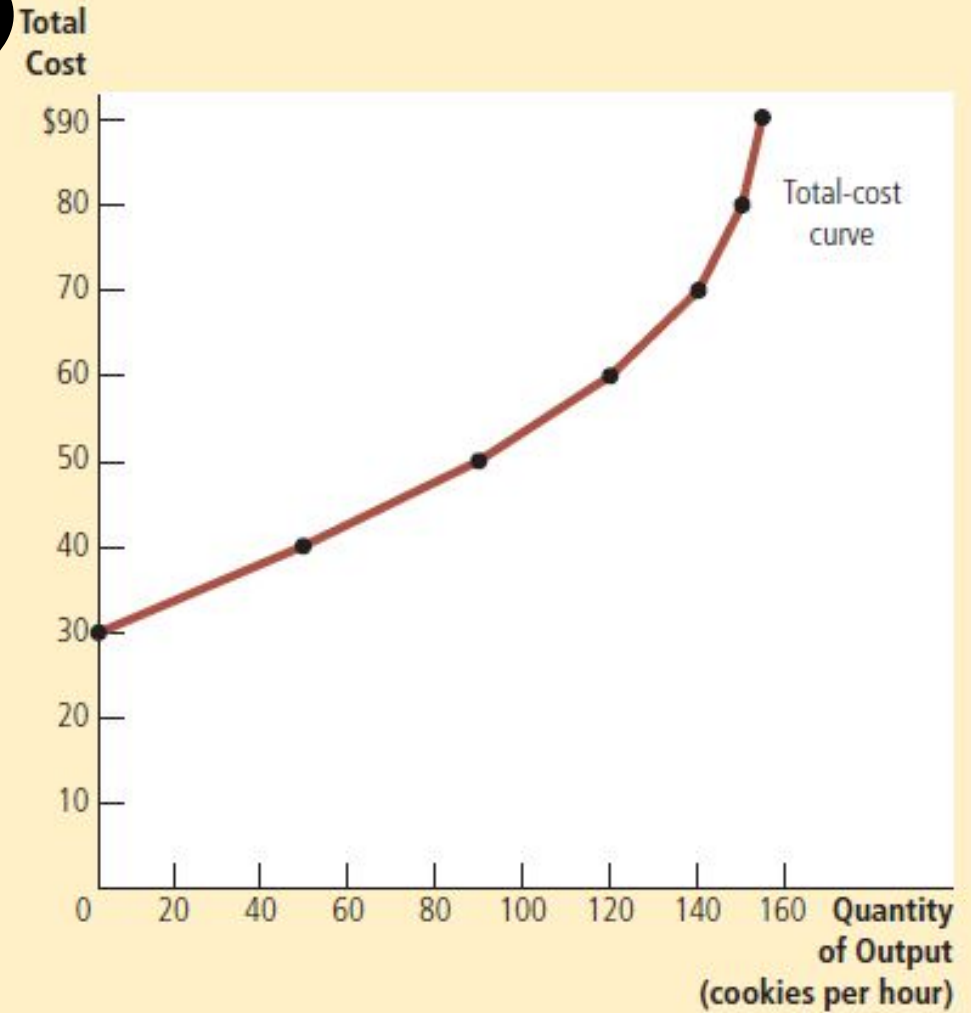
What would happen if we keep
on increasing the inputs?

Number of Workers	Output (quantity of cookies produced per hour)	Marginal Product of Labor
0	0	
1	50	50
2	90	40
3	120	30
4	140	20
5	150	10
6	155	5

(a) Production function



(b) Total-cost curve



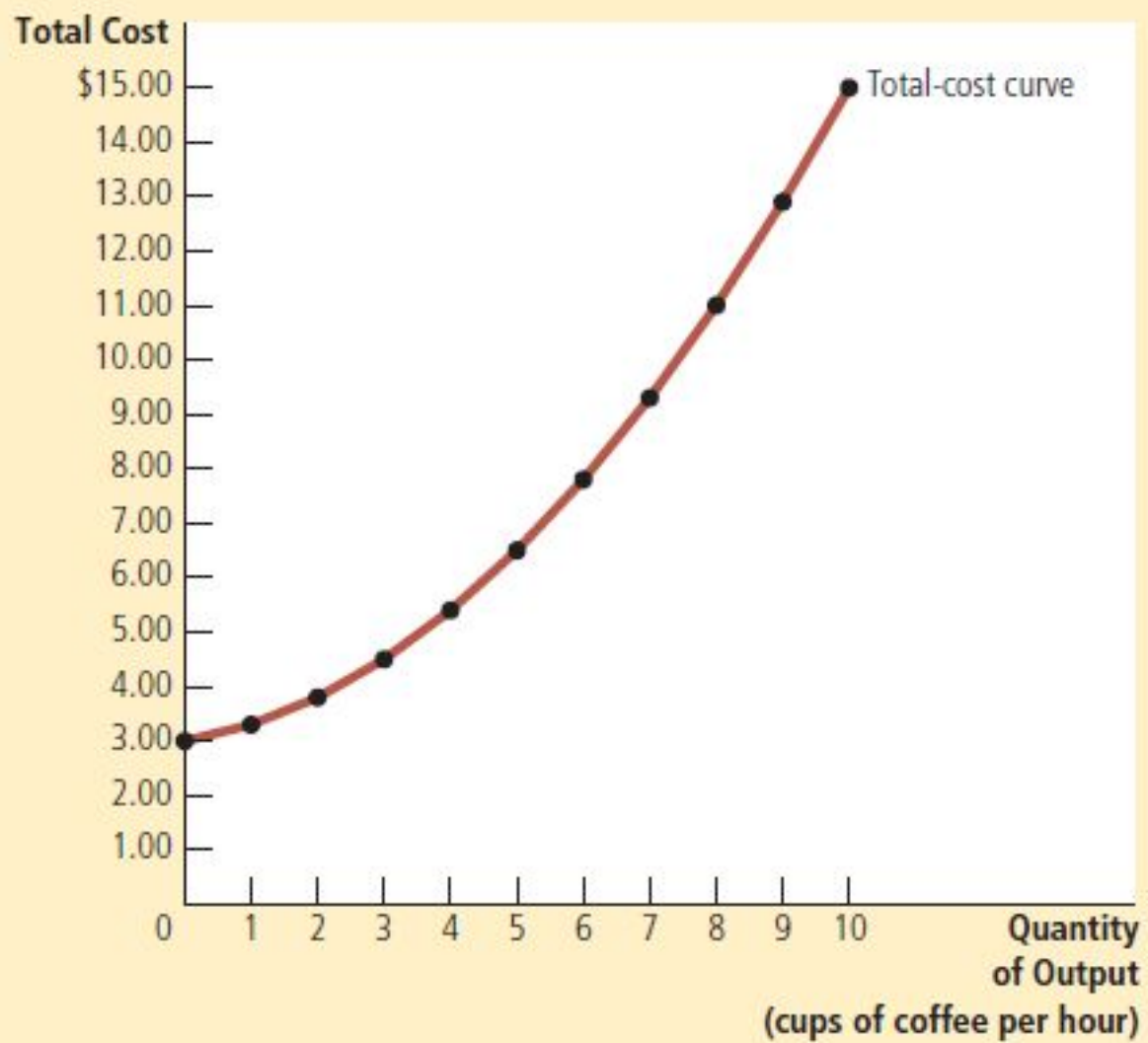
MEASURES OF COST

FIXED COST

Costs that do not vary with the quantity of output produced

VARIABLE COST

Costs that vary with the quantity of output produced



FORMS OF MARKETS

PERFECT COMPETITION

MONOPOLY

MONOPOLISTIC

OLIGOPOLY

PRINCIPLES OF MACROECONOMICS

Mohit Kumar Shrivastav

7263806867

India to be world's third-largest economy by 2032, largest by end of the century: CEBR

India, emerging as the third and "eventually the largest economic superpower", is anticipated to have a GDP "90 percent larger than China's and 30 percent larger than that of the US" by 2100, CEBR stated in its report.

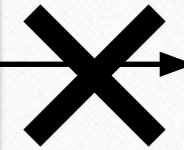
MONEYCONTROL NEWS

DECEMBER 27, 2023 / 09:42 PM IST



in Us

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- Literacy rate
- Employment
- Health Care
- Infrastructure

Mint
India to see severe shortage of jobs in the next 35 years |
New Delhi: India faces the serious challenge of finding jobs for a growing population over the next 35 years; its economy could absorb less...

The new India story: Jobless growth, and a rising disconnect between education and employment

bl. The Hindu Business Line

Sri Lanka's economic crisis revealed: Over half the population 'multidimensionally vulnerable,' says UNDP survey



Sri Lanka's economic crisis has left over half the population "multidimensionally vulnerable", with 12.34 million people affected.

2 Sept 2023

BS Business Standard

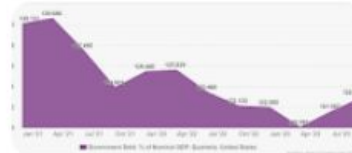
Sri Lanka govt debt rose to 115.2% of GDP by the end of 2022: Report



The Sri Lankan government's debt has risen to 115.2 per cent of Gross Domestic Product (GDP) by the end of 2022 from 104.5 per cent a year...

19 Mar 2023

United States Government debt accounted for **123.0 %** of the country's Nominal GDP in Sep 2023, compared with the ratio of 121.6 % in the previous quarter.



CEIC Data
<https://www.ceicdata.com> > ... > United States

US Government Debt: % of GDP, 1969 – 2023 | CEIC Data

Jeff Bezos Told His Employees, 'I Predict One Day Amazon Will Fail. Amazon Will Go Bankrupt.' But His Goal is to Delay The Inevitable. In 2021, Jeff Bezos took a nostalgic trip down memory lane by sharing a newspaper clipping from 1999 that featured an article doubting the viability of his company. 16 Aug 2023



Yahoo Finance

<https://finance.yahoo.com/news/jeff-bezos-told-empl...>

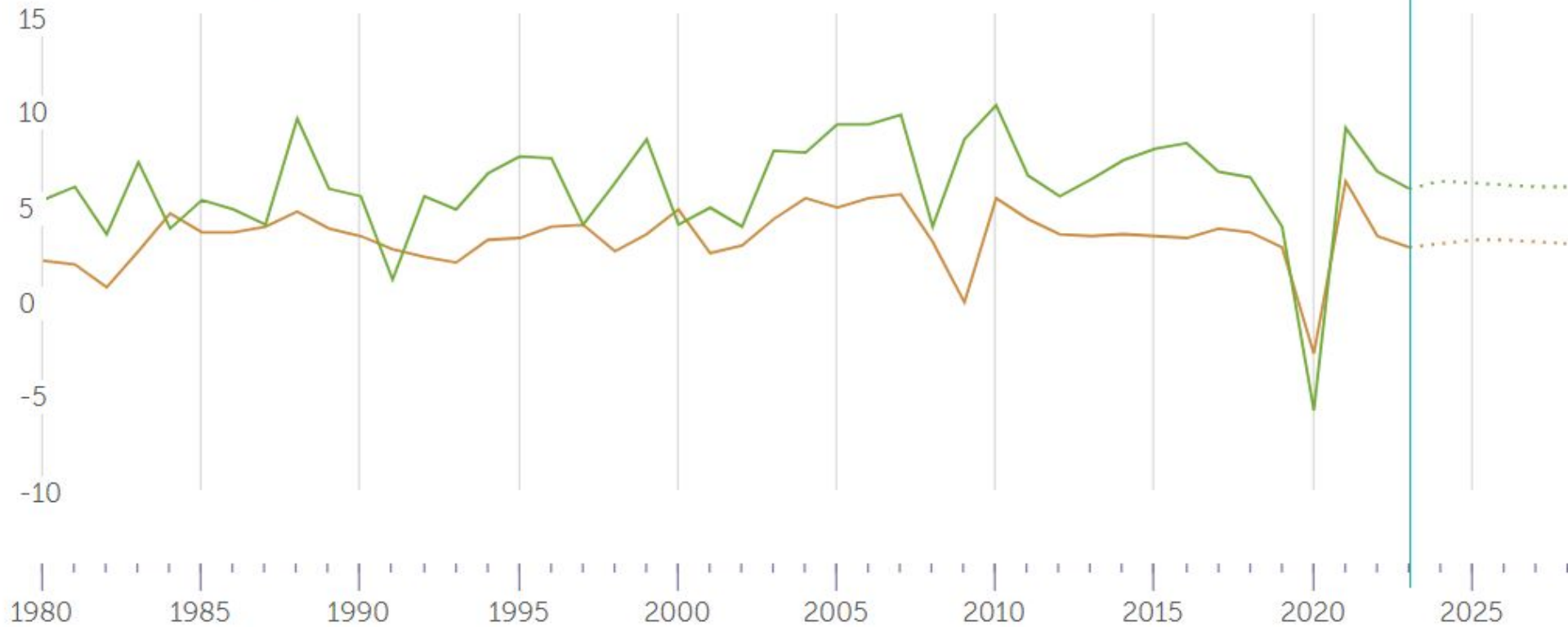
Jeff Bezos Told His Employees, 'I Predict One Day Amazon ...

BUSINESS CYCLE

- Economic fluctuations in **output and employment** are referred to by economists as business cycles.
- For e.g. we witness some economies having high inflation while some struggling with low growth rates.
- These fluctuations, though common, are irregular.
- This cyclical nature of business cycle raises questions like, **What** causes these fluctuations, How to explain them? Can policymakers avoid recessions? If so, what **policy levers** should they use?
- Hence, It becomes imperative to understand the business cycle to **formulate policies** accordingly.

TREND (1980-2028)

Annual percent change



Comparative trend of Real GDP Growth between India & Rest of the World

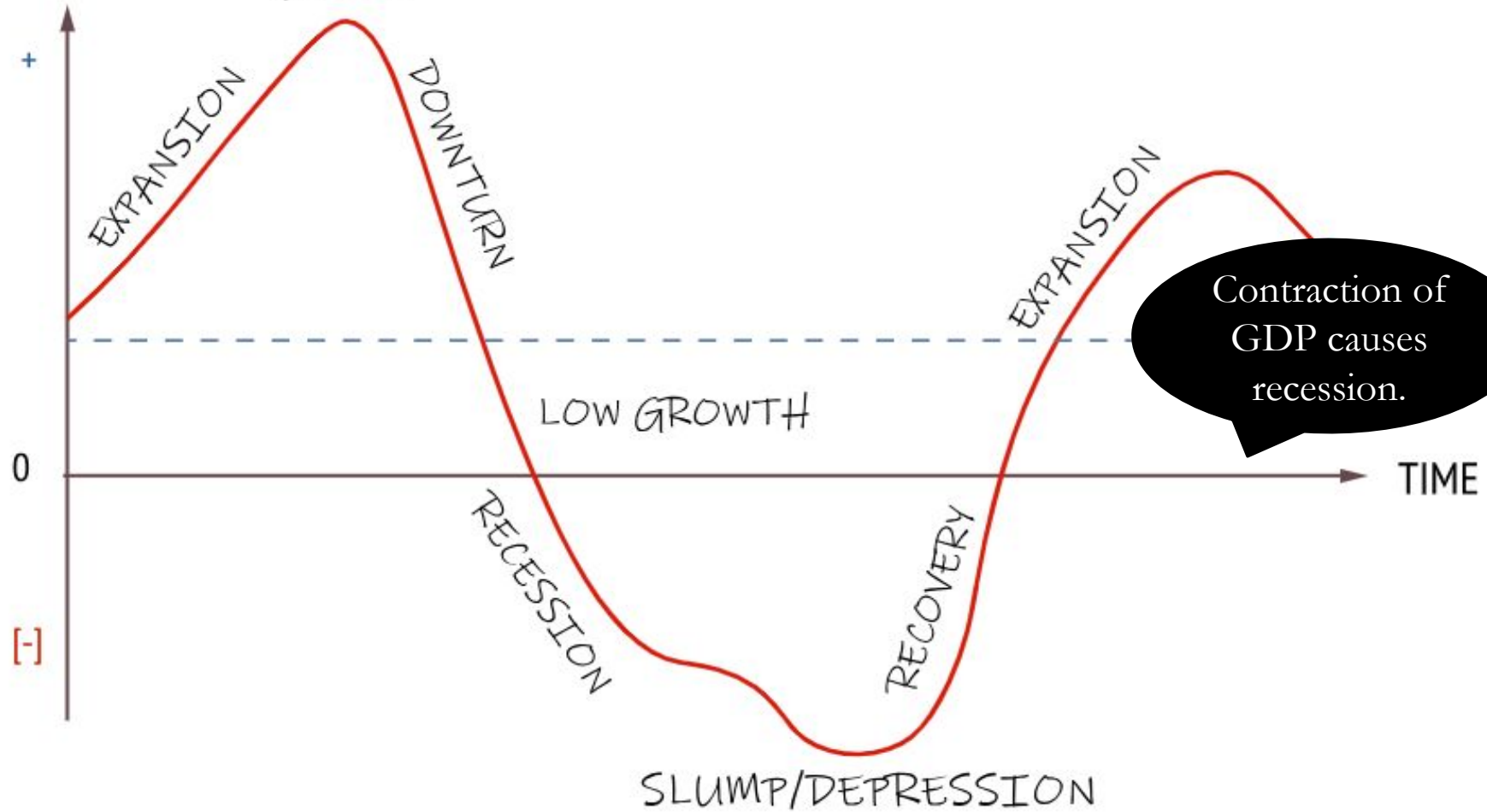
India- Green

World- Red

National income

Real GDP

% change



ECONOMIC GROWTH

- GDP is the broadest indicator of overall economic conditions, so a natural place to start in analyzing the business cycle.
- The economy's gross domestic product measures total income and total expenditure in the economy.
- In a closed economy without government, GDP is primarily dependent on **Consumption and Investment**.
- A fall in growth would imply a fall in either consumption or investment or both.
- Generally investment is more volatile than consumption.

TH The Hindu

Indian economy to see sharp V-shaped recovery in Q3, Q4: N.K. Singh

India will see a sharp V-shaped recovery in the third and fourth quarters of the current fiscal, but FY21 GDP growth would ultimately be in...

27-Jul-2020



TOI The Times of India

Indian economy's V-shaped recovery that critics miss - Times of India

India's real GDP is likely to expand by 7% in 2022-23. For three successive years ending 2023-24, India will be among the fastest growing...

11-Jan-2023



bl The Hindu Business Line

India's civil aviation sector has seen a V-shaped recovery post-Covid: Scindia

New Delhi, December 7 The country's civil aviation sector has seen a V-shaped recovery post-Covid with domestic daily passenger demand...

07-Dec-2022





Mint

Central government likely to increase dearness allowance to 45% for employees and pensioners

Indian government likely to increase dearness allowance for employees and pensioners by 3% to 45% from existing 42%.

16 mins ago



Dearness allowance is a cost of living adjustment that the Government pays to public sector employees and pensioners

MEASURING THE COST OF LIVING

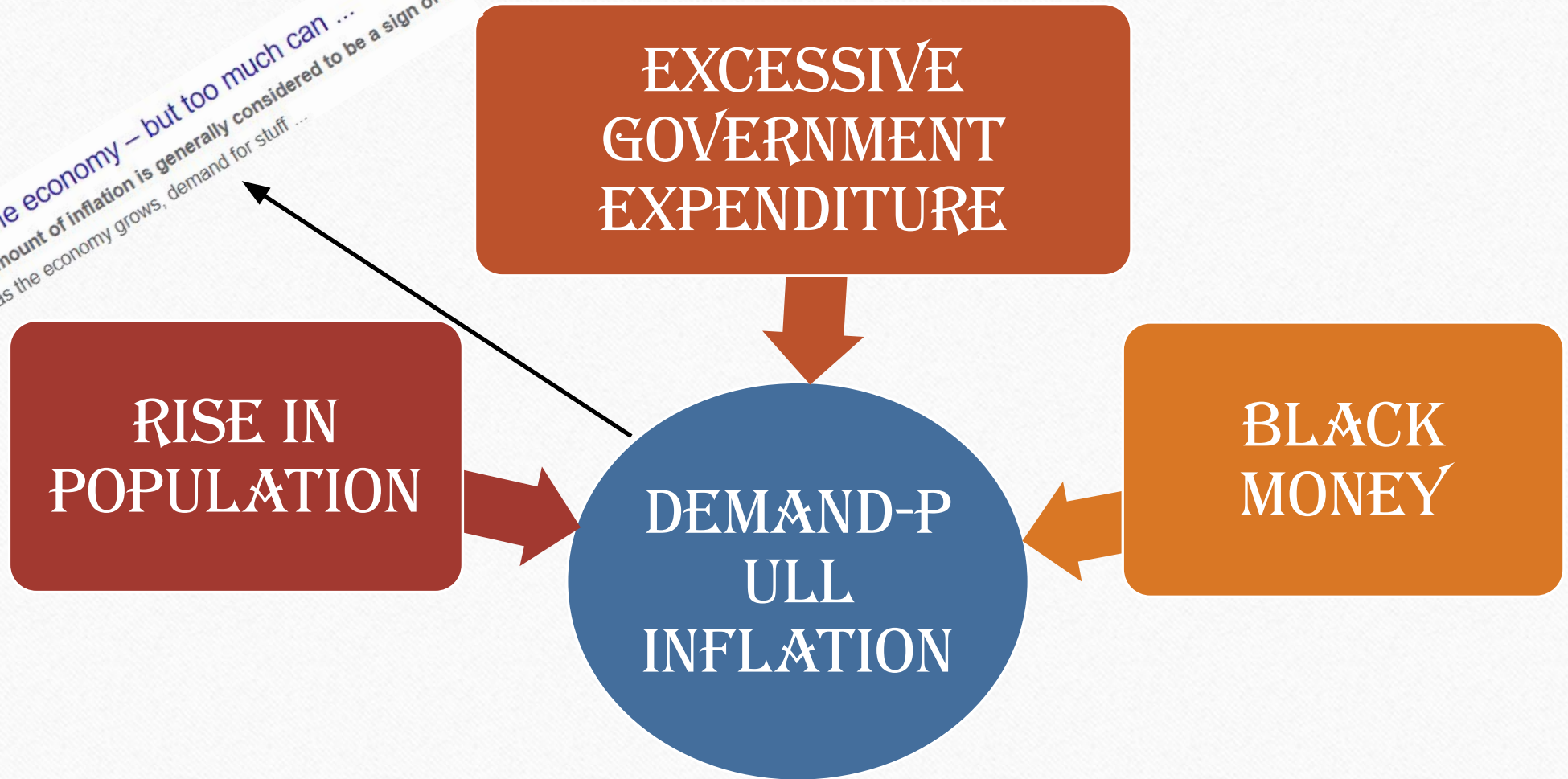
Consumer Price Index (CPI)

Wholesale Price Index (WPI)

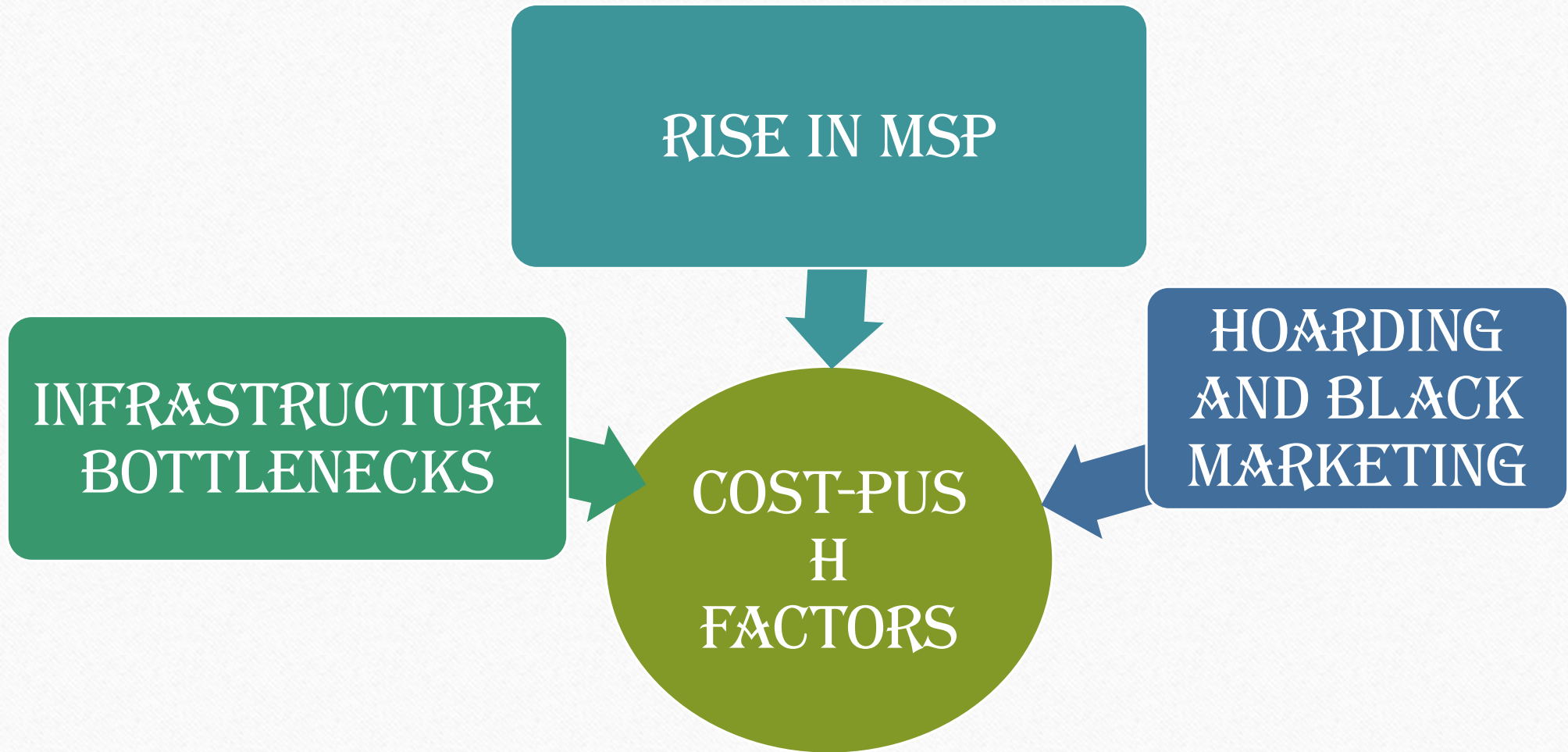
Producer Price Index (PPI)

CAUSES OF INFLATION

Inflation is healthy for the economy – but too much can ...
13-Jun-2019 — A moderate amount of inflation is generally considered to be a sign of a healthy economy, because as the economy grows, demand for stuff ...



Must Read- The case against inflation targeting



CONSUMER PRICE INDEX

- Consumer Price Index (CPI) is designed to measure the changes over time in general level of **retail** prices of **selected goods and services** that households purchase for the purpose of consumption
- Changes in CPI affect the purchasing power and **welfare** of the consumer.
- CPI measures price changes by comparing, through time, the cost of a **fixed basket** of commodities.
- CPI numbers were originally introduced to provide a measure of changes in the living costs of workers, so that their wages could be compensated to the changing level of prices.

260
Commodities

TIME PERIOD- 2012



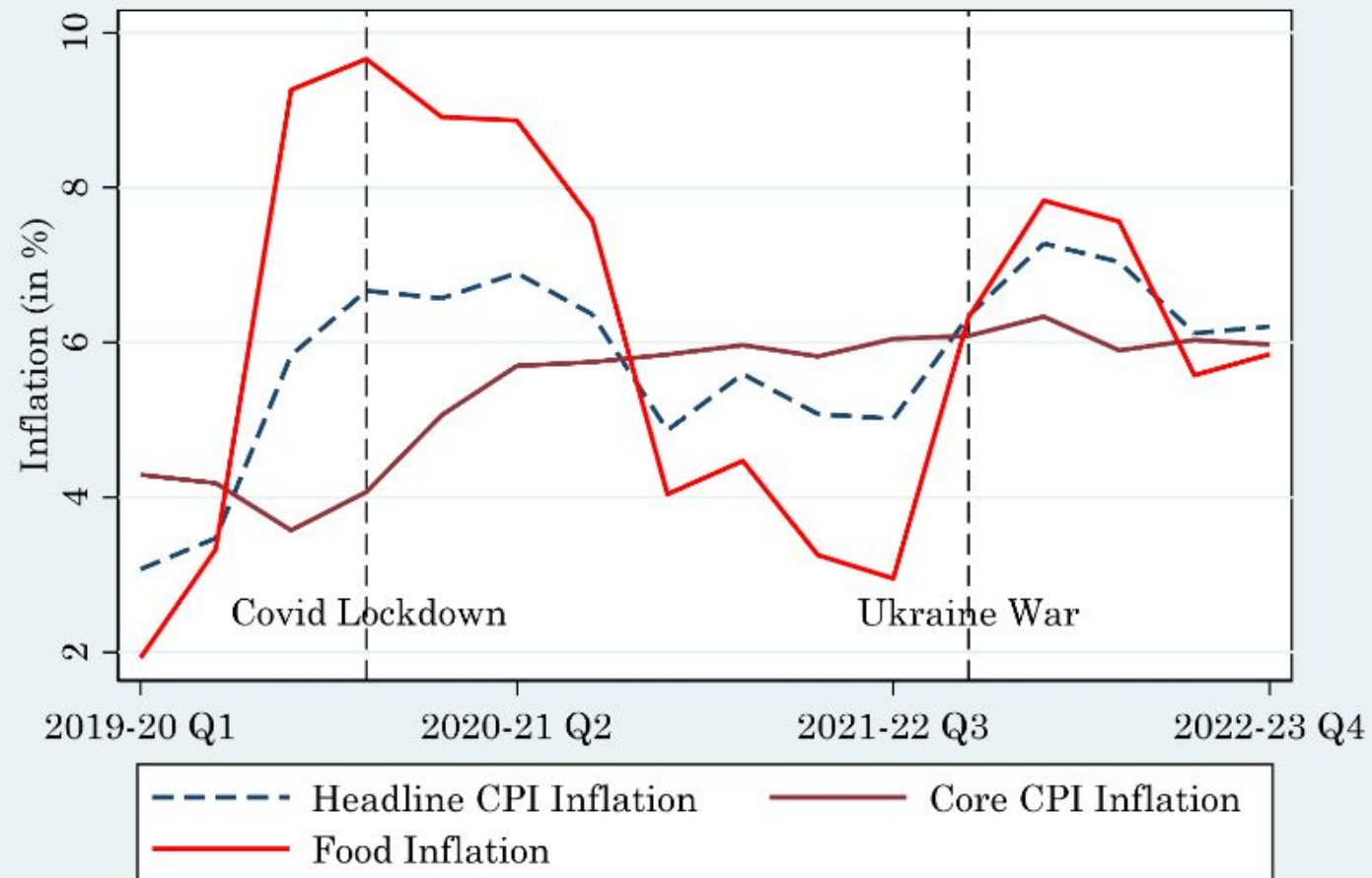
Price of basket in 2014 = Rs 100

TIME PERIOD- 2023



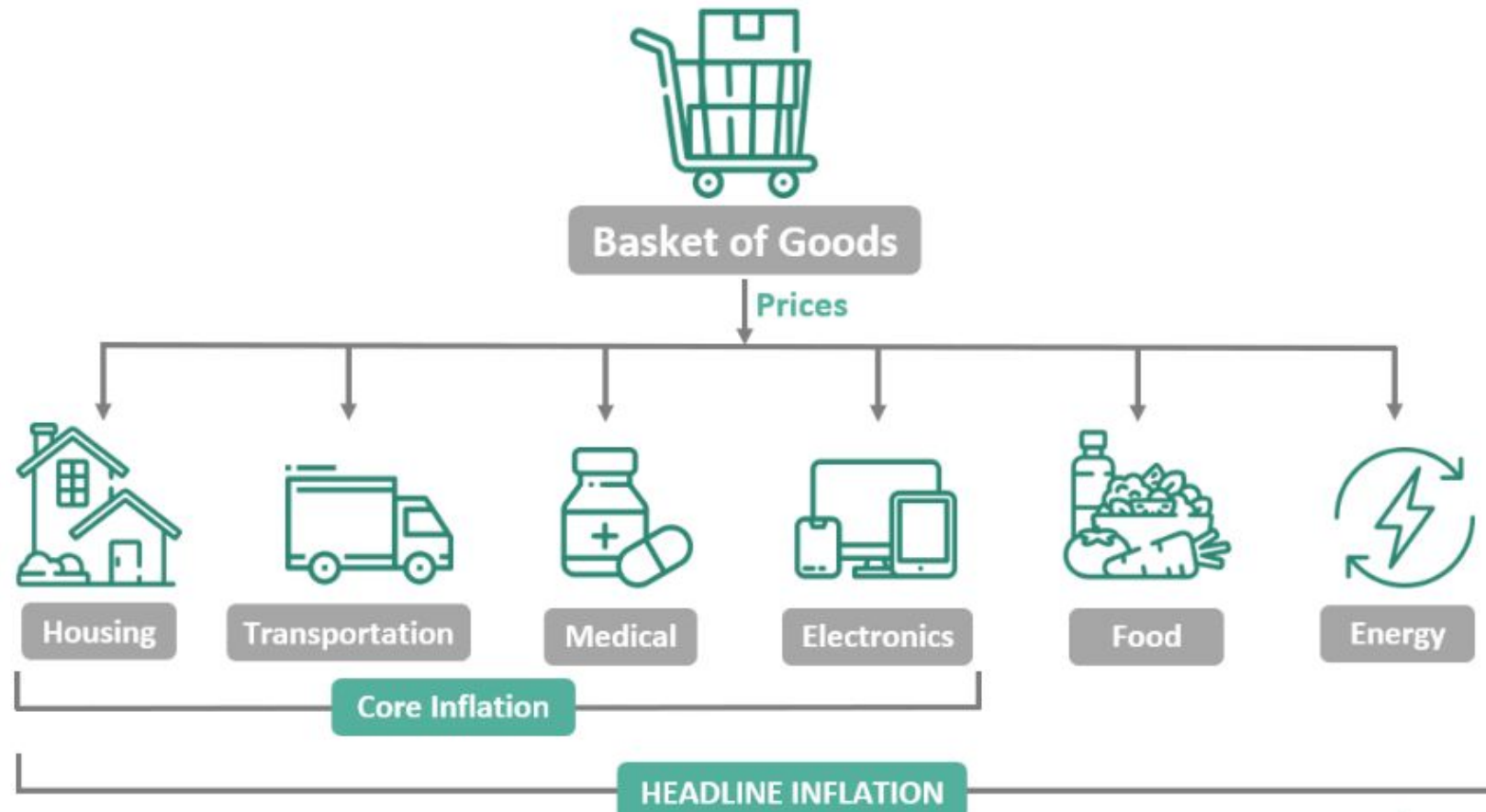
Price of basket in 2023 = Rs 170

Figure 1. Quarterly CPI inflation



Core inflation removes those components of CPI which are **highly volatile**.

HEADLINE INFLATION



10 Aug 2023, 08:50:56 AM IST

RBI Policy Live: RBI to reiterate caution amid a spike in food prices: Madhavi Arora

The upcoming MPC policy will see the RBI reiterating caution amid a spike in perishable food prices, even as easing core inflation and possible mean reversion in food price trends in Q4CY23 would keep the RBI on hold, with a focus on the durable elements of inflation, said Madhavi Arora, Lead Economist at Emkay Global Financial Services.

10 Aug 2023, 08:33:12 AM IST

RBI Policy Live: June MPC Minutes showed divergent views of members on future rate hikes

India's six-member monetary policy committee (MPC) members appeared increasingly divergent in their views on the future course of rate hikes, with some external members arguing that further tightening could hamper the economic recovery, the minutes of their June meeting showed.

"Monetary policy is now dangerously close to levels at which it can inflict significant damage to the economy," external member Jayant Varma wrote in the minutes published by the RBI. [Read here](#)

DOES KNOWING CPI HELP?


 Times of India

Explained: Why inflation may hurt some more despite peaking out and how India compares globally

India's retail inflation or Consumer Price Index (CPI) inflation for the ... "Inflation is largely driven by food prices such as wheat and...

2 weeks ago



 Business Standard

Indias retail inflation stays above 7%; IIP growth hits 12-month high

The CPI for June was primarily driven by sticky food prices. Consumer food price inflation stood at 7.75 percent in June compared with 7.97...

2 weeks ago



High inflation rate in India is majorly driven by food items. If inflation is above the acceptable level, what can be done?

RESULT OF FOOD DRIVEN INFLATION: INDIA RESTRICTS EXPORTS OF WHEAT

 Eco-Business.com

India wheat export ban stays despite G7 pressure

India's ban on wheat exports has denied the country's farmers and traders an opportunity to earn money from the sale of wheat in the global...

30-May-2022



 The Economic Times

India faces heat at WTO over wheat export ban

India had banned wheat exports on May 13 to control rising domestic prices amid concerns over local output being hit by high temperatures and...

1 month ago



 Times Now

Wheat flour exports curbed; What next in the war on inflation?

However, where food security is a challenge, those countries can be prioritized." Related News. After ban on wheat India restricts exports of...

3 weeks ago



PROBLEMS WITH CPI

- **Substitution Bias**- What if the price of petrol crosses Rs 250/Litre?

CPI **overstates** the true change in the cost of living.

- **Unmeasured quality change**- Higher cost- Improvement in quality of product

Overstates the cost of living.

What happens if we overestimate inflation?

CALCULATING CPI

- **Survey** to determine basket of goods
- Record the price of each good in every year
- Compute the cost of basket
- Choose a **base year** and compute CPI for the current year

CPI =

$$CPI_t = \frac{C_t}{C_0} * 100$$

CPI_t = consumer price index in current period

C_t = cost of market basket in current period

C_0 = cost of market basket in base period

WHOLESALE PRICE INDEX

676
Commodities

- Wholesale Price Index (WPI) represents the price of goods at a wholesale stage i.e. goods that are sold in bulk and traded between organizations instead of consumers.
- The main objective of WPI is monitoring price drifts that reflect demand and supply in manufacturing, construction and industry.

<https://www.jagranjosh.com> › current-affairs › reserve-... :

Reserve Bank of India adopted CPI as new measure of Inflation

03-Apr-2014 — The Reserve Bank of **India** on 1 April 2014 **adopted** the **Consumer Price Index (CPI)** as the key measure of **Inflation**. It was **adopted** in the ...

NOTE

- Once we calculate inflation, RBI takes suitable policy measures for it.
- **Some inflation is good for the economy- Why?**
- Why is CPI adopted by India to measure inflation?
- In case of inflationary situations, monetary policy intervention is the only solution
- Can inflationary expectations increase the cost of living?
- **How do I increase purchasing power in an economy?**

CIRCULAR FLOW OF INCOME

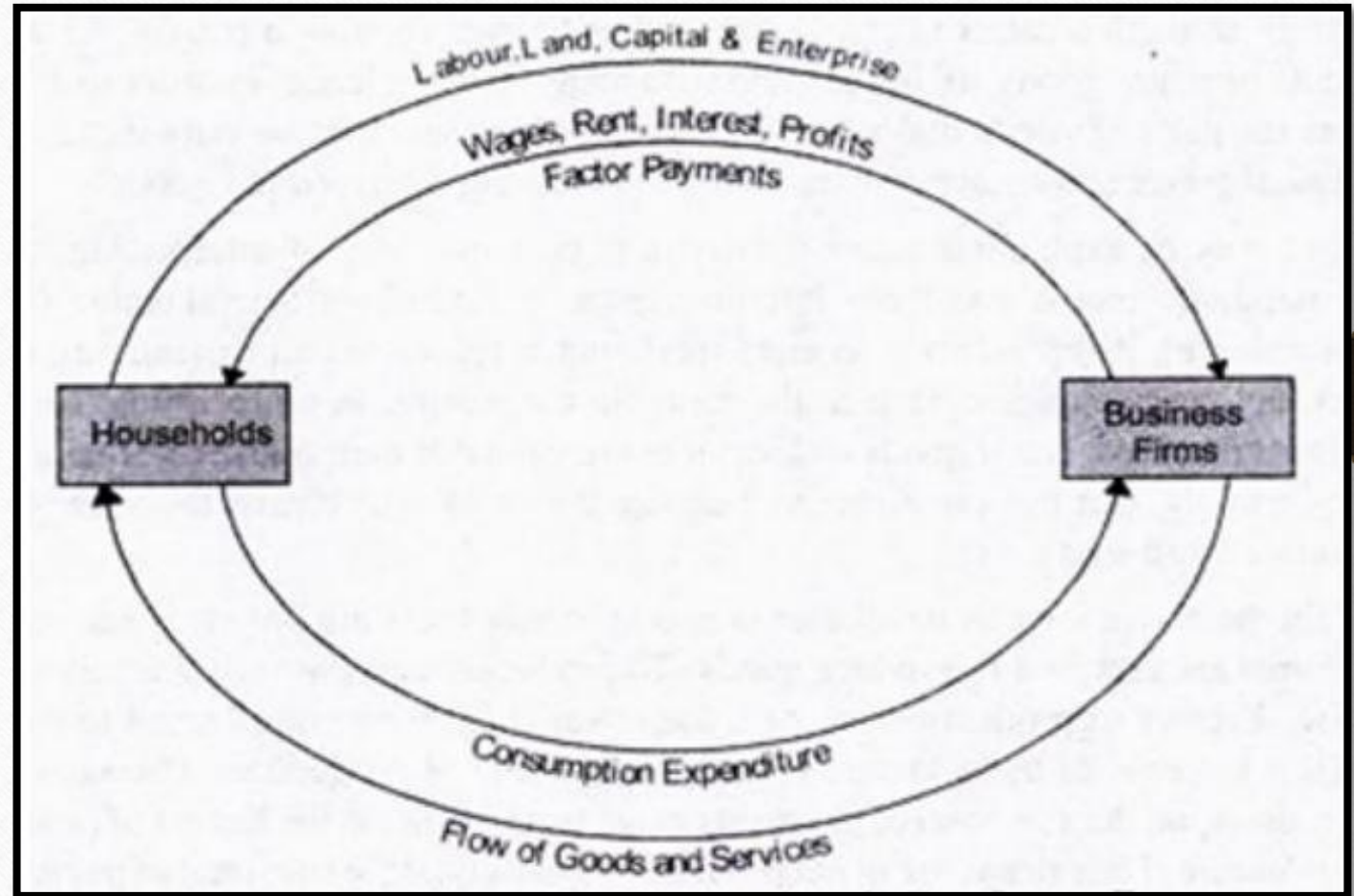
- Land, Labour, Capital & Entrepreneur- 4 factors of production
- What do we give to each factor of production?
- Importance of Consumption, Savings, Investment & **Financial Institutions**.
- Stock- Measured **at a particular point of time**
- Flow- Measured over a period of time.

2 SECTOR MODEL

Assumptions

- No Savings by households
- No government (No taxation)
- Closed Economy

Under these assumptions, whatever expenditure is being incurred by households become income for the business firms and vice-versa. Through this the money injected into the economy **keeps changing hands.**



3 SECTOR

- Savings are considered by economists as leakage in the economy.
- In 2 sector model, money flow changes due to external shocks.
- Here due to savings, consumer spends a fraction of **Income** on consumption which goes to firms.
- The fraction of income which the consumer saves is called AP(S) (**Explain- APS & MPS**)
- Due to reduced earning, firms employ less workers thereby **reducing national income**.



- If we further relax the assumption of Banking sector/Financial Institutions, these savings which are causing leakage into the economy can be **injected** back into the economy.
- Financial institutions- Help in bridging the gap between demand and supply of money. Households generally have surplus money while firms need money to produce both, capital and consumer goods.
- Money flow will not reduce into the economy as long as investment=savings
- What happens if, Investment(Injection) < Savings (Leakage) ? **(Increase in inventory, Layoff of workers, increase in unemployment and fall in GDP)**
- **What happens if Savings < Investment?**
- If the assumption of closed economy is also relaxed- Exports and imports of goods & services.
- Trade surplus (Exports > Imports) and Trade deficit (Exports < Imports)
- Trade surplus- Exports > Imports- **Capital inflow.**