Market *vs*. Government — The Neoclassical school *vs*. The Keynesians

The Unemployment Rate

- to be *unemployed,* a person must want to work and be actively looking for a job (but have not yet found one).

- the *labor force* consists of those who are employed and those who are unemployed.

- the *unemployment rate* is equal to the number of unemployed people divided by the labor force.

UNEMPLOYMENT RATE: India
[July 2017- June 18]

All India: 6.1%

Rural Males: 5.8%

Rural Females: 3.8%

Urban Males: 7.1%

Urban Females: 10.8%

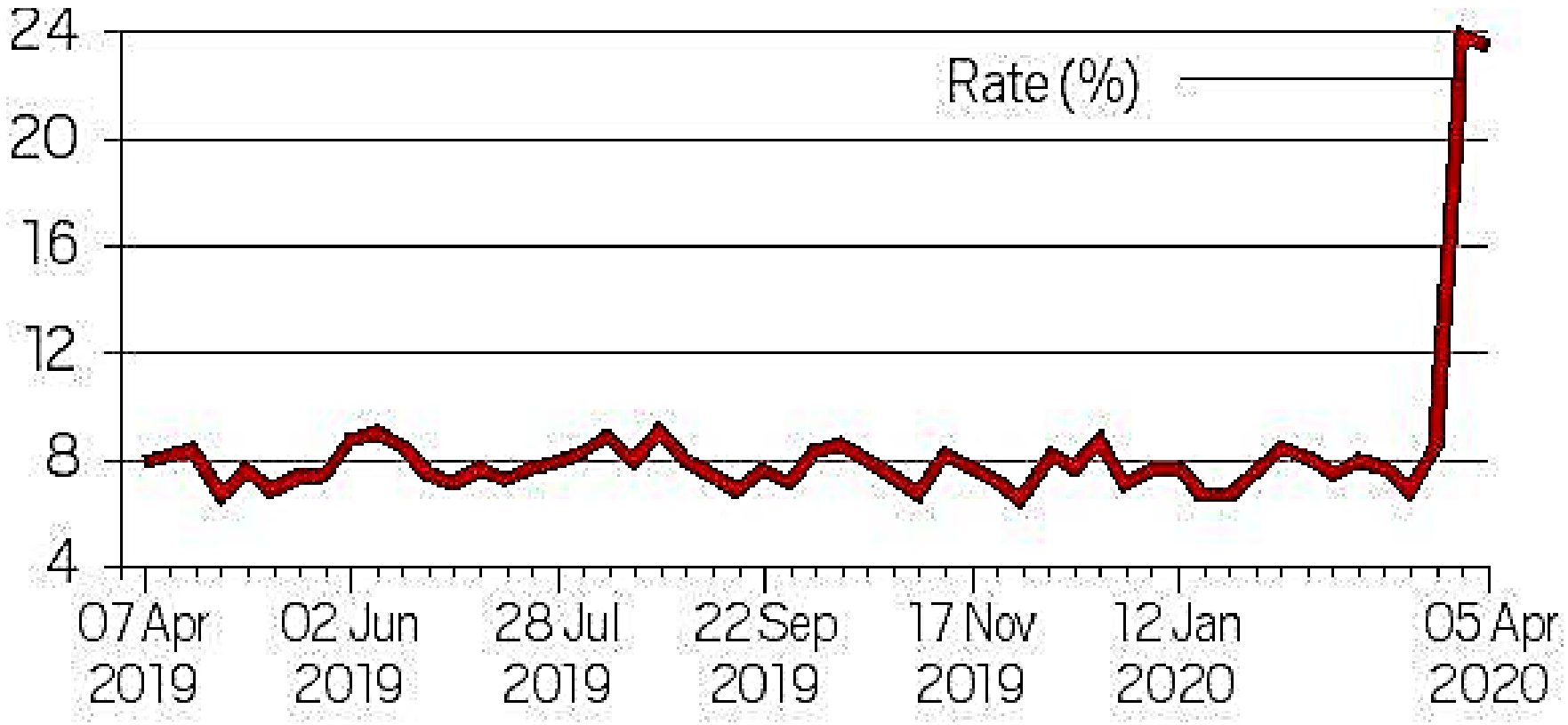
Measuring Joblessness: The Unemployment Rate

Labor Force = Number of Employed + Number of Unemployed

$$\text{Unemployment Rate} = \frac{\text{Number of Unemployed}}{\text{Labor Force}} \times 100$$

$$\text{Labor-Force Participation Rate} = \frac{\text{Labor Force}}{\text{Adult Population}} \times 100$$

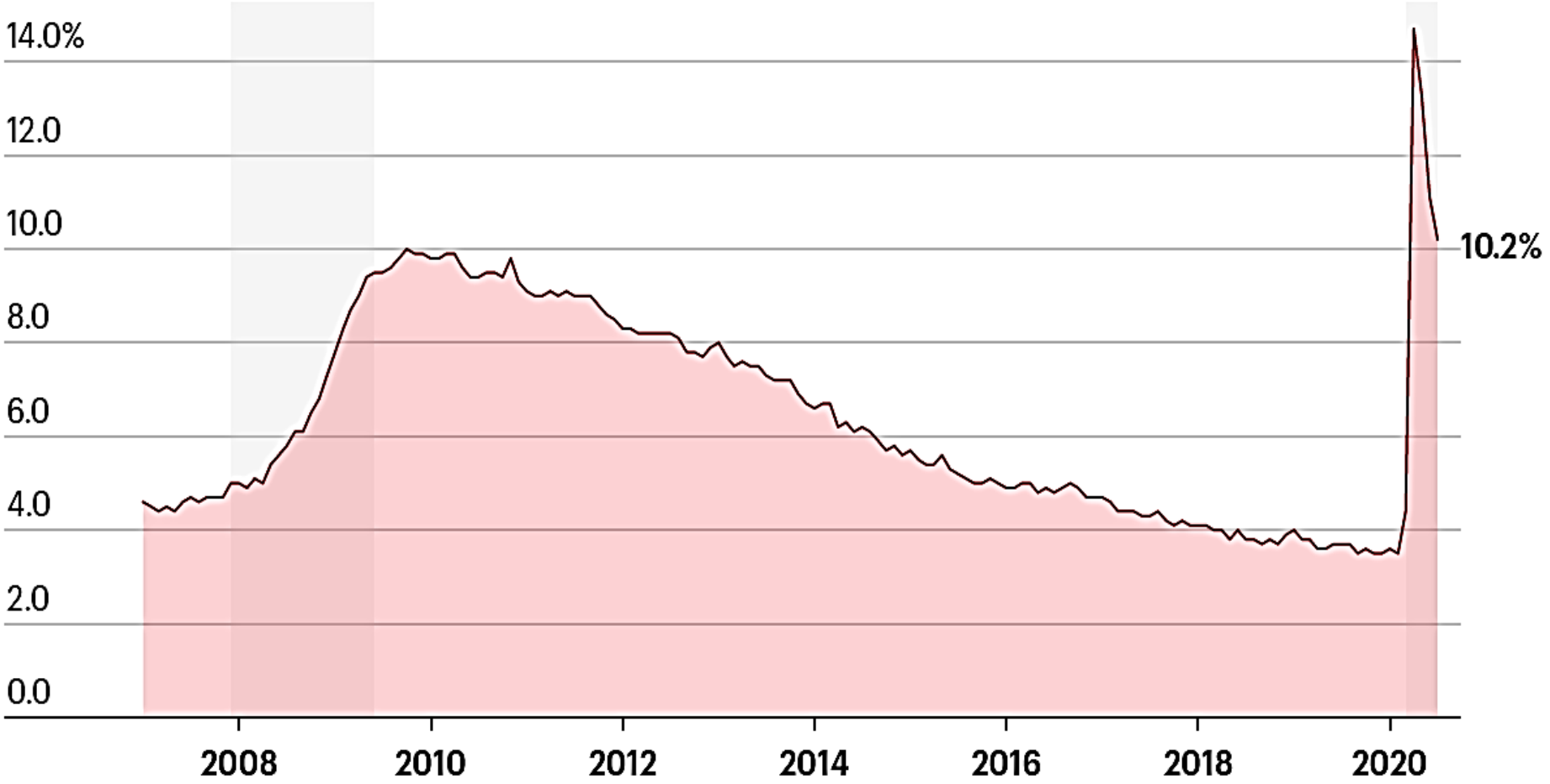
UNEMPLOYMENT RATE



Source: CMIE

Week ended

U.S. unemployment rate

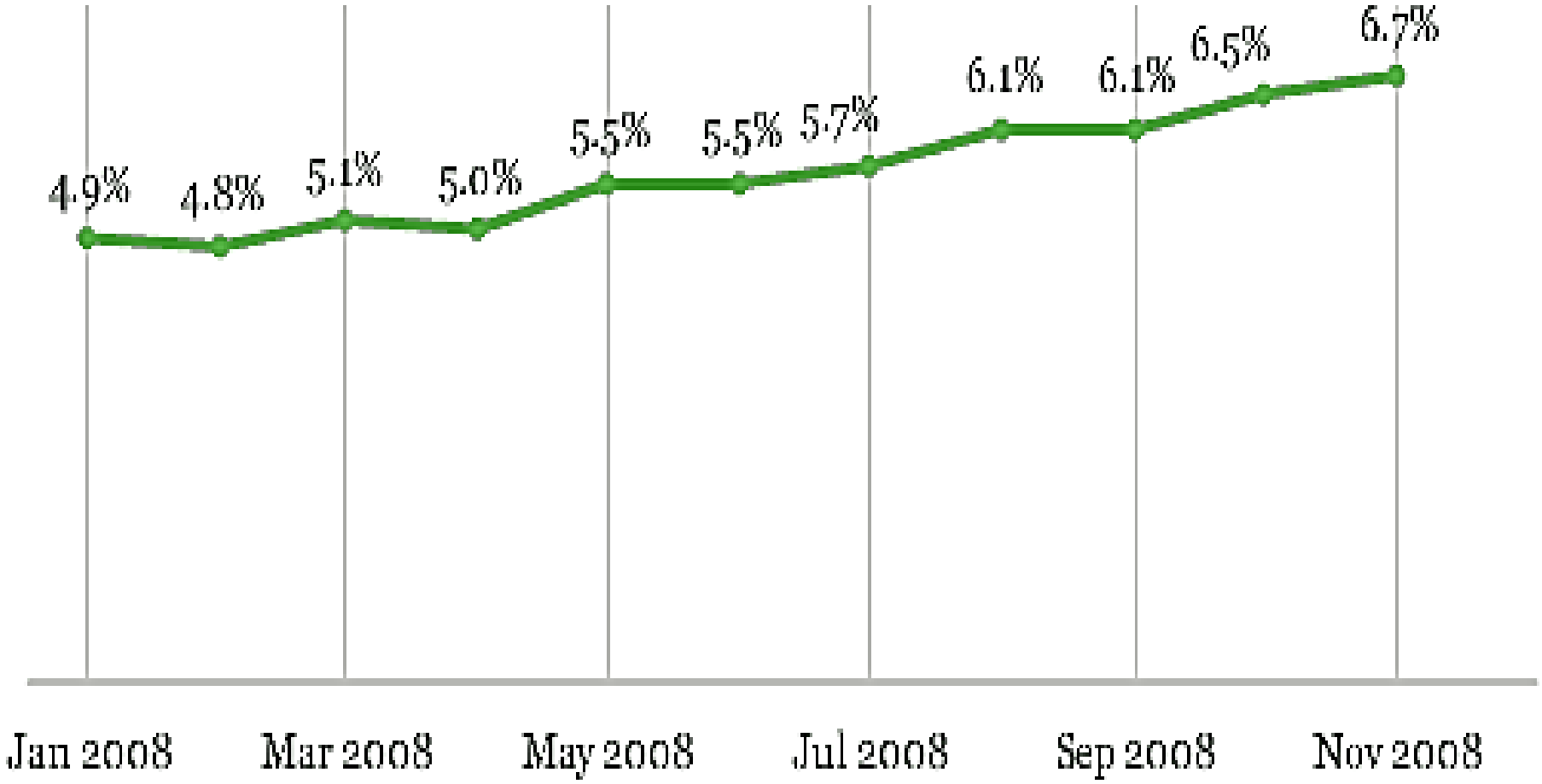


SEASONALLY ADJUSTED FIGURES. HIGHLIGHTED DATE RANGES INDICATE RECESSION

CHART: LANCE LAMBERT • SOURCE: U.S. DEPARTMENT OF LABOR

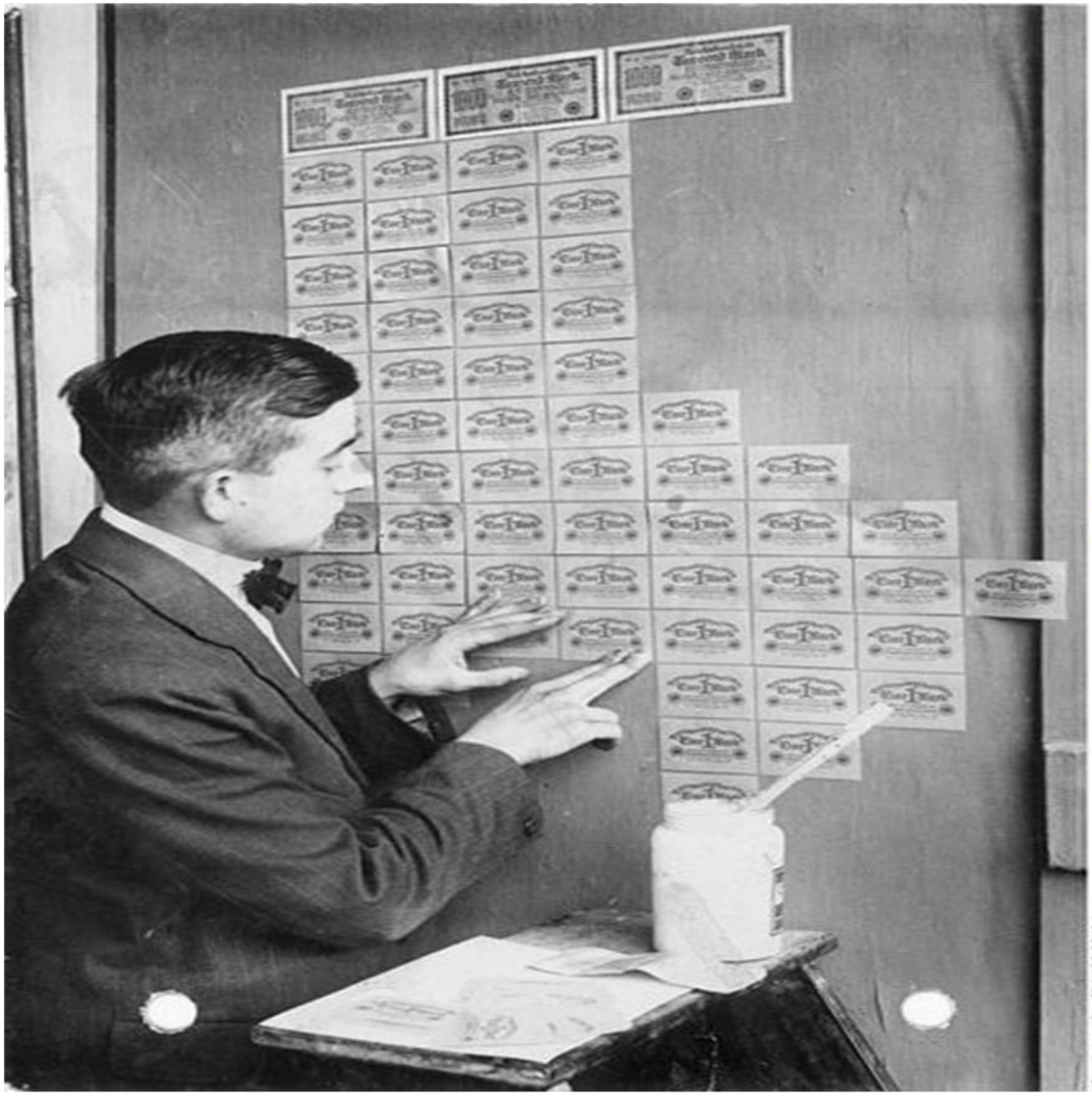
U.S. Unemployment Rate 2008

Source: U.S. Department of Labor



Cases of Hyperinflation

Bolivia (1983-1985): prices increased by 23,000 percent!



Germany (1923): banknotes had lost so much value that they were used as wallpaper!

20th Century Hyperinflations		
Nation	Year(s)	Peak Inflation (%)
Angola	1991-95	1×10^{9}
Argentina	1983-92	1.5×10^{9}
Austria	1922-23	500,000
Belarus	2000-08	1×10^{8}
Bolivia	1984-86	1×10^{6}
Bosnia/Hergez.	1992-93	5×10^{7}
Brazil	1967-94	2.75×10^{18}
China	1948-55	1.5×10^{19}
Georgia	1993-95	1×10^{6}
Greece	1944	5×10^{13}
Hungary	1922-24	n/a
	1945-46	4×10^{29}
Mexico	1982-92	1,000
Nicaragua	1987-90	5×10^{10}
Peru	1988-90	1×10^{6}
Philippines	1942-44	100
Poland	1921-24	1.8×10^{6}
	1989-91	10,000
Romania	1990-98	5×10^{6}
Russia	1992-98	1,000
Taiwan	1944-49	4,000
Ukraine	1993-95	100,000
U.S.S.R.	1921-22	n/a
Yugoslavia	1989-94	1.3×10^{27}
Zaire	1989-96	3×10^{11}
Zimbabwe	2000-08	1×10^{25}

HS 101 : Macroeconomics

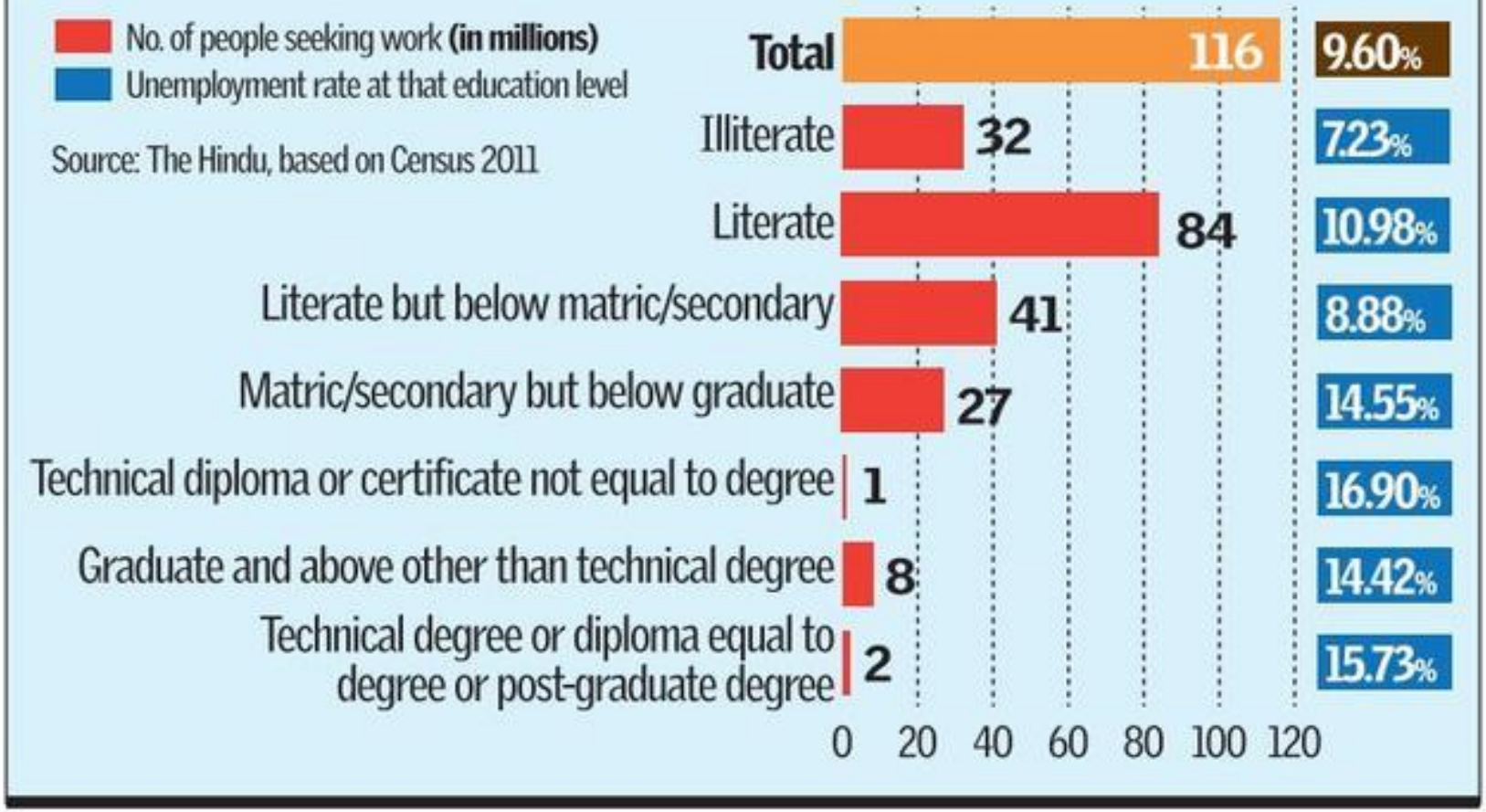
2nd Week [October, 2020]

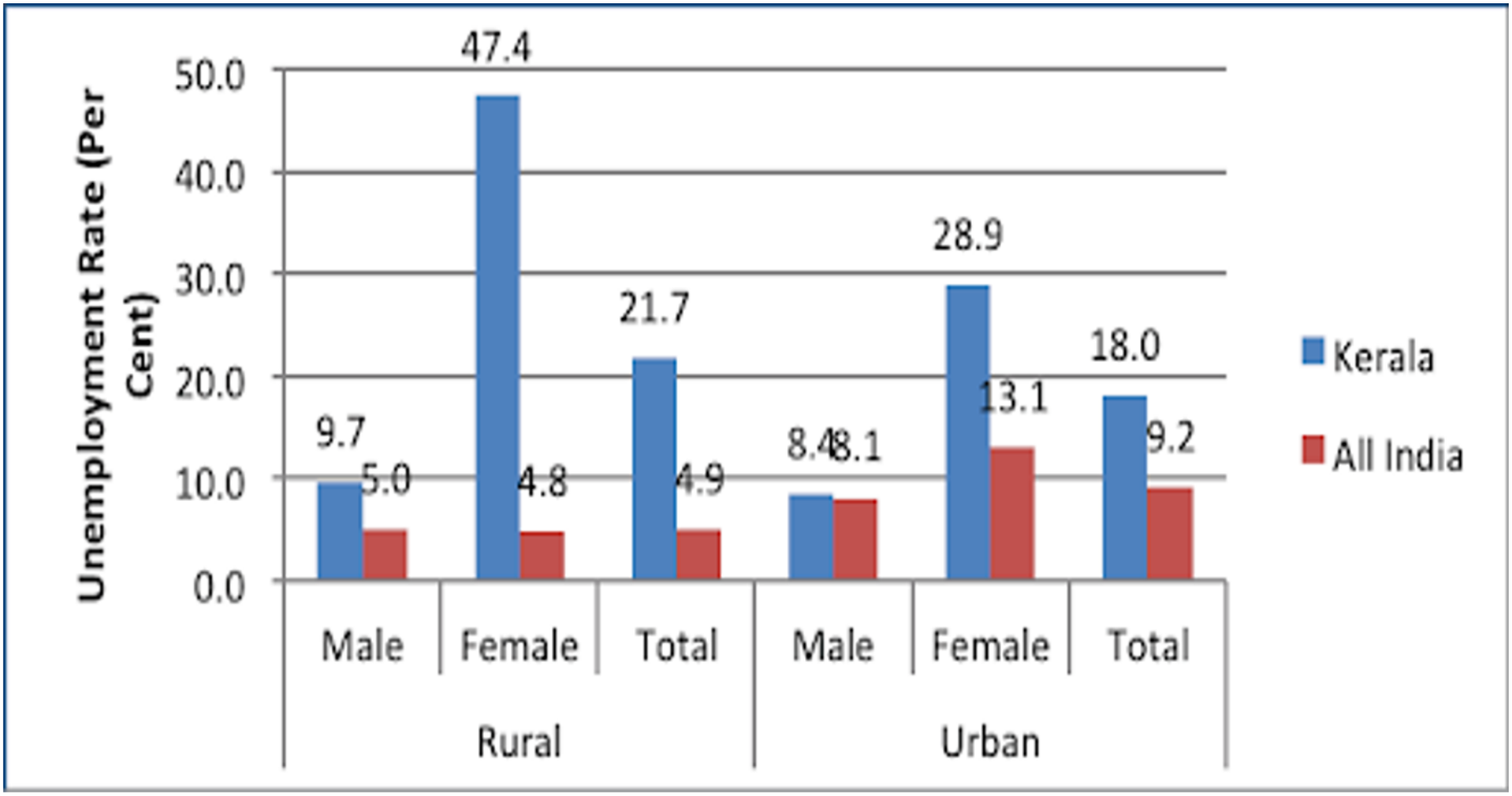
N. **G**regory **M**ankiw : **Chapter 10** *onward*

Unemployment : **Chapter 14**

WHO ARE INDIA'S UNEMPLOYED?

Data emerging from Census 2011 suggest unemployment rate is high among the better qualified





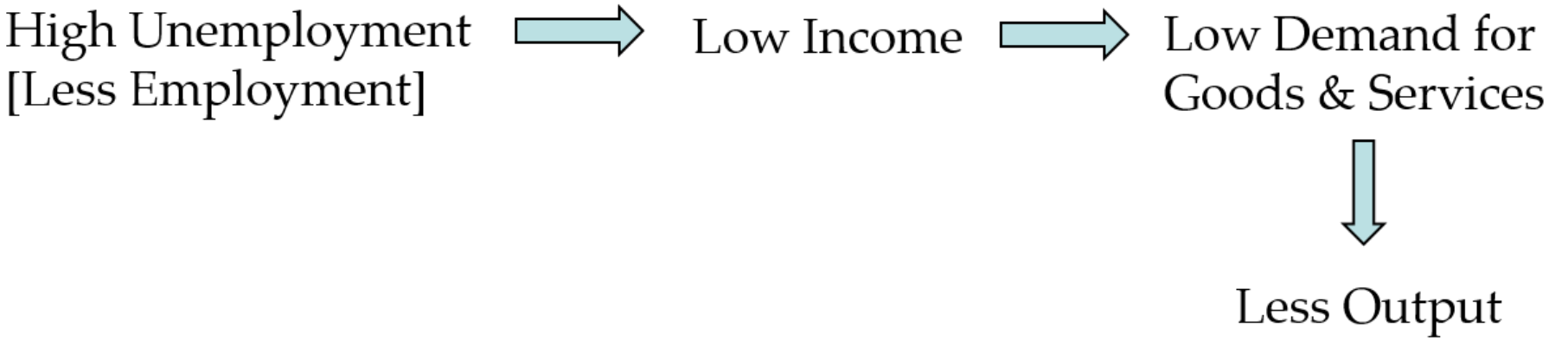
Source: **Economic Review 2016**, *State Planning Board Kerala*


महाराष्ट्र शासन
जिल्हा रोजगार व
स्वयं-रोजगार
मार्गदर्शन केंद्र, ठाणे

The unemployment rate at times is used to reflect the state of the business cycle in the economy.

When output is falling / shrinking ⟹ Labour demand falls and (involuntary) Unemployment rate increases.

The (Un)employment – Output Interlinkage

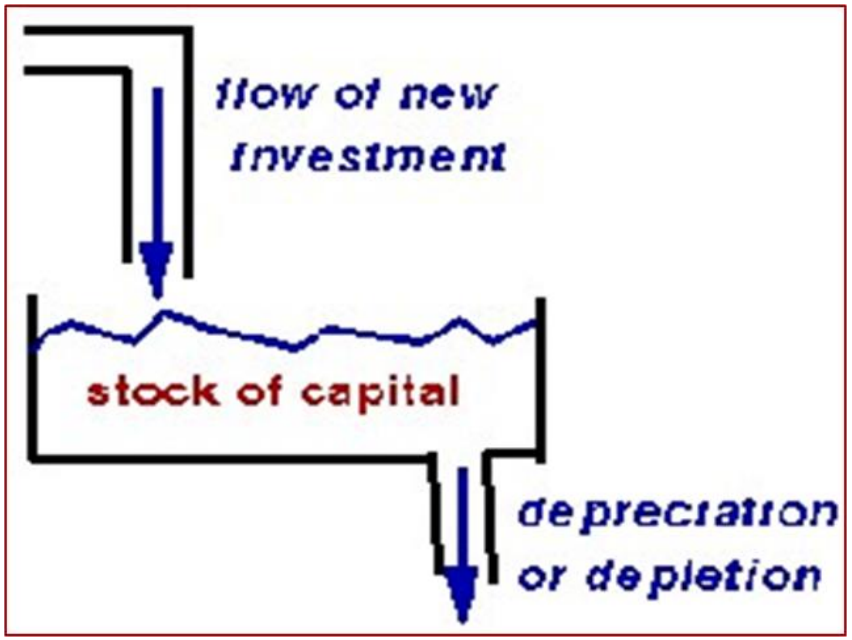


Stock and Flow

- Stock variables are measured *at a given point of time*. The macro stock variables are: **total money supply**, **total bank deposits**, **inventory**, **capital stock**, etc.

- Flow variables are measured *over a period of time*. The macro flow variables are: **consumption**, **investment**, **national income** and **output**, etc.

Total money supply is a stock quantity, but the change in money supply is a flow quantity.

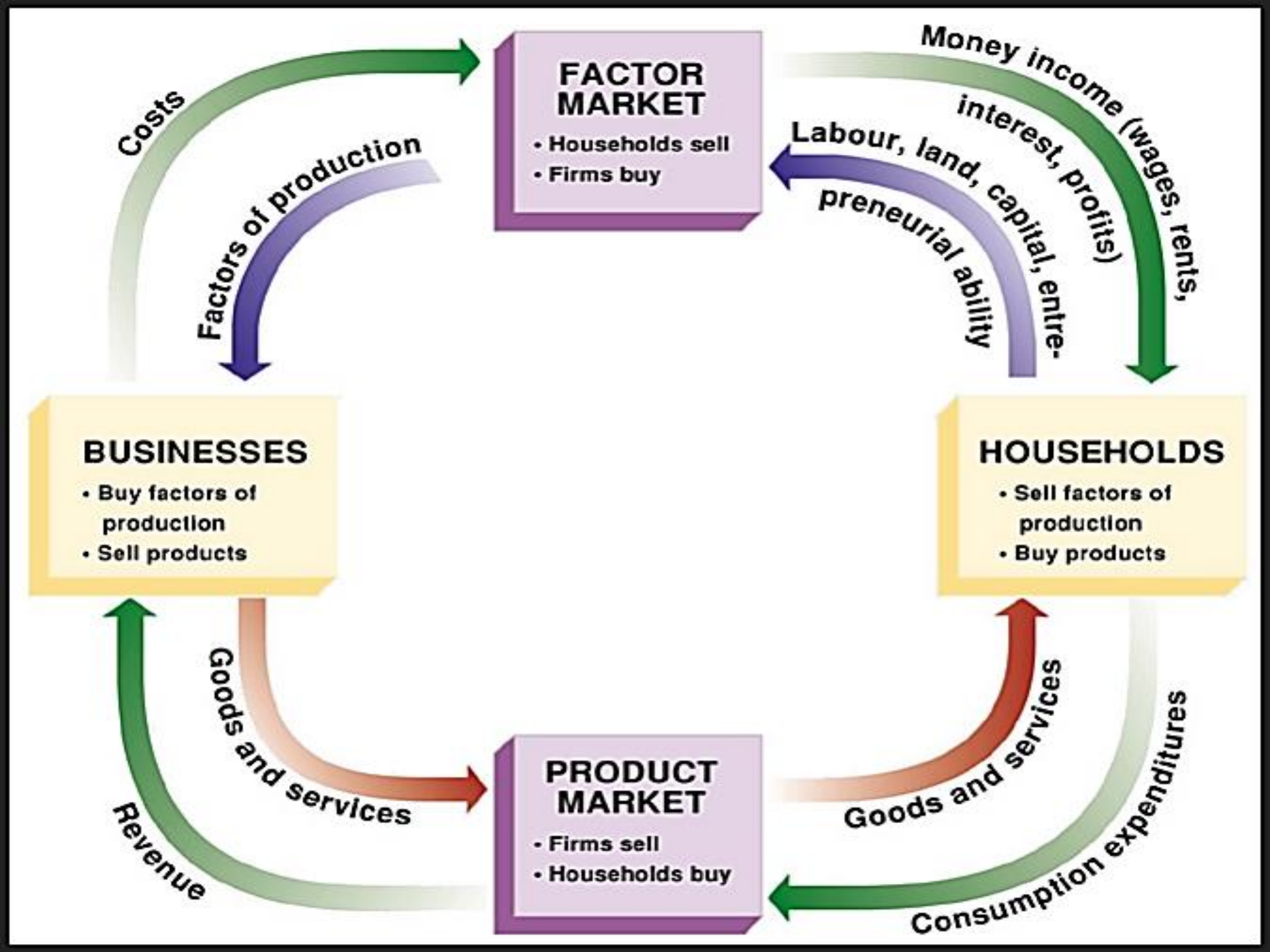


Govt. **d**ebt is *stock* but **B**udget **d**eficit is *flow*.

Stock of **A**ssets but **F**low of **I**ncome.

- **Stock and Flow**
  - ***Stock*** may be defined as any economic variable which has been accumulated at *a specific point of time*
    - like money, assets and wealth.
  - ***Flow*** includes the variables which increase (inflows) and decrease (outflows) the stock, *over a period of time*.
    - like income, consumption, saving and investment

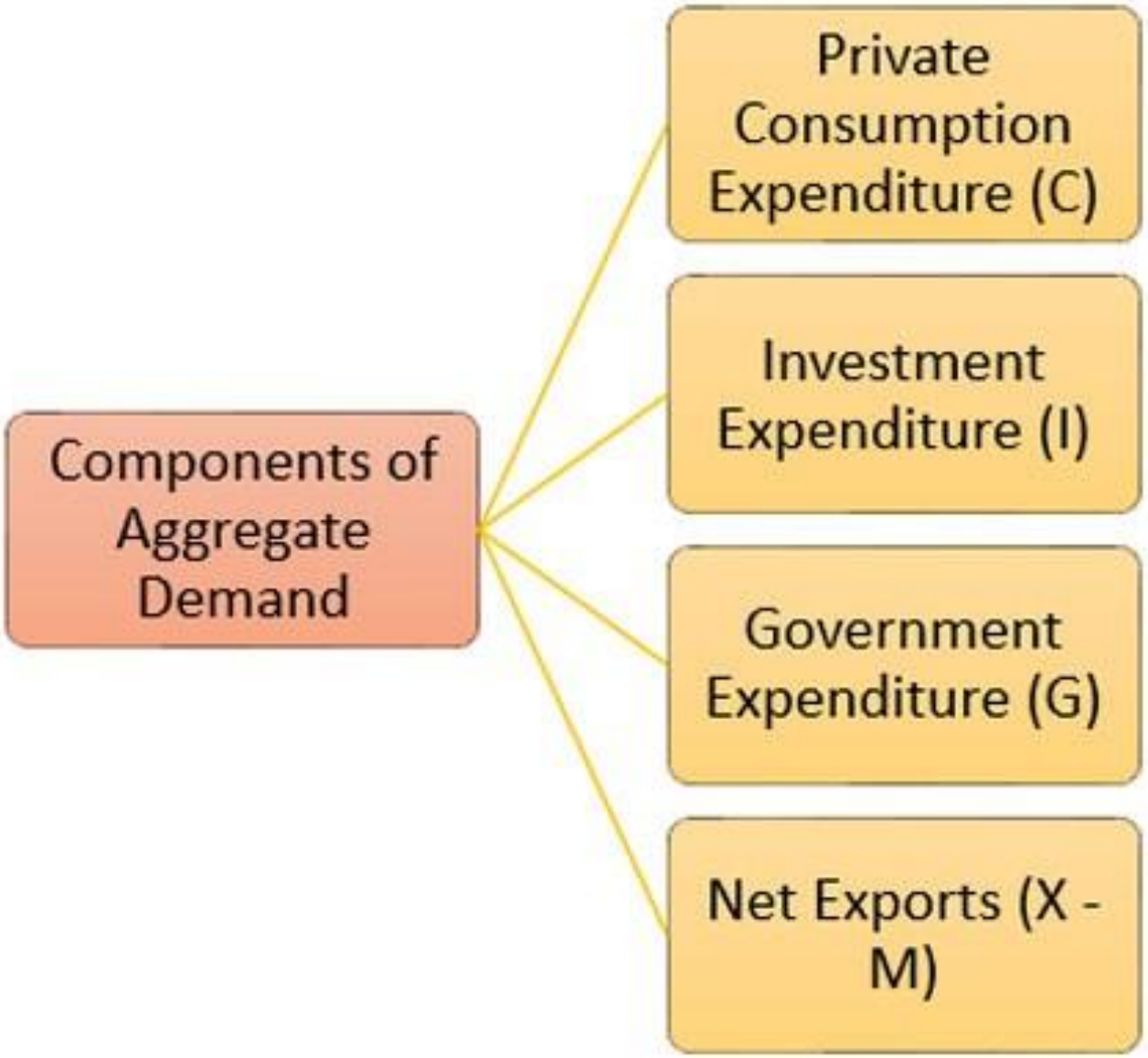
Stock=Inflows-Outflows


FACTOR MARKET
• Households sell
• Firms buy
Costs
Factors of production
Money income (wages, rents, interest, profits)
Labour, land, capital, entre-preneurial ability
BUSINESSES
• Buy factors of production
• Sell products
HOUSEHOLDS
• Sell factors of production
• Buy products
Goods and services
Revenue
PRODUCT MARKET
• Firms sell
• Households buy
Goods and services
Consumption expenditures

Aggregate Demand (AD)

- **Refers to the total amount that different sectors in the economy willingly spend on goods and services in a given period.**

- **Aggregate demand is the sum of spending by consumers (on *cars, food items, tourism*, etc.), businesses (*investment on construction of houses and factories, machines and equipments*), government (*spending on highways, missiles*) and the rest of the world (*exports and imports*).**

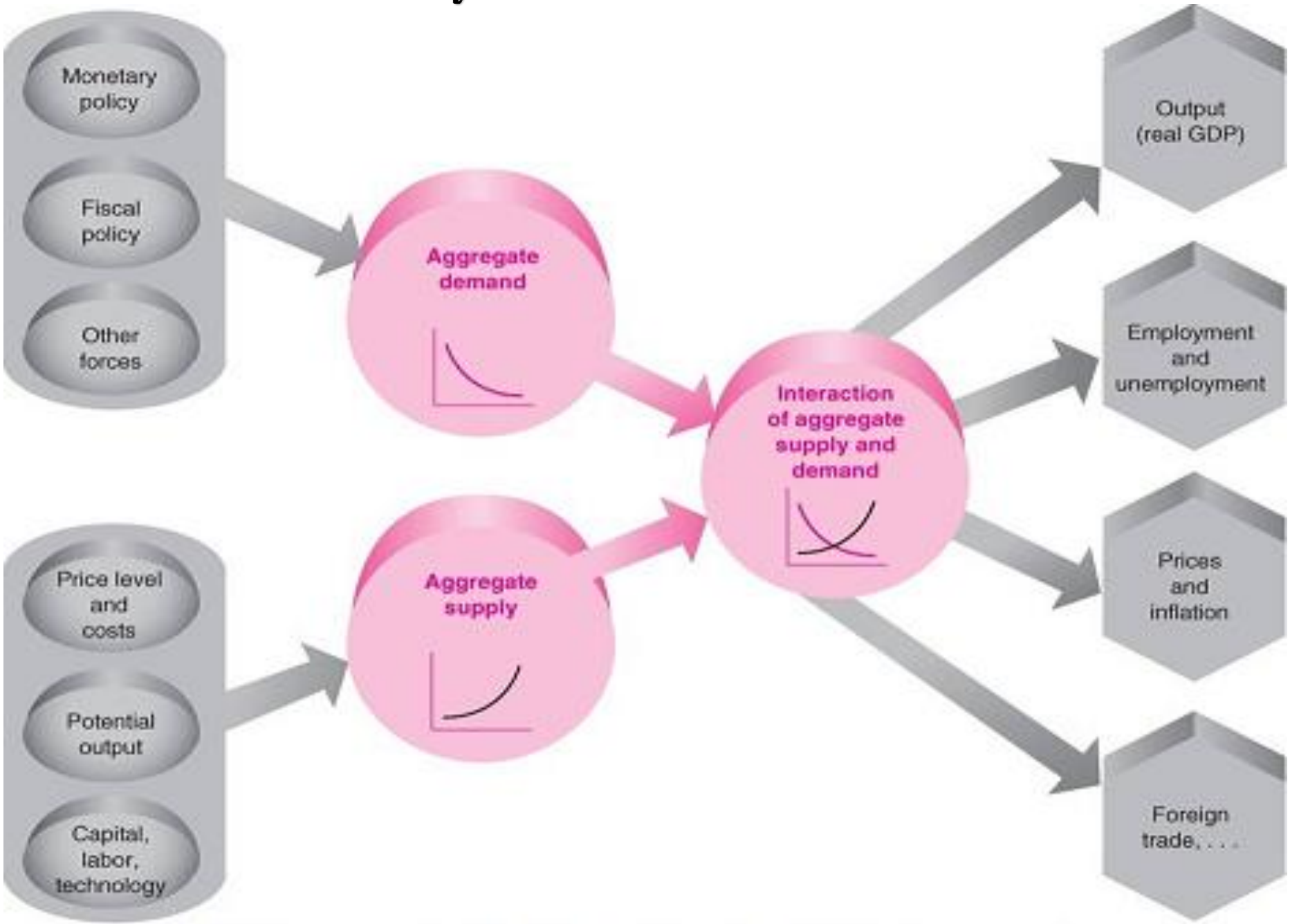

Components of Aggregate Demand
Private Consumption Expenditure (C)
Investment Expenditure (I)
Government Expenditure (G)
Net Exports (X - M)

Aggregate Supply (AS)

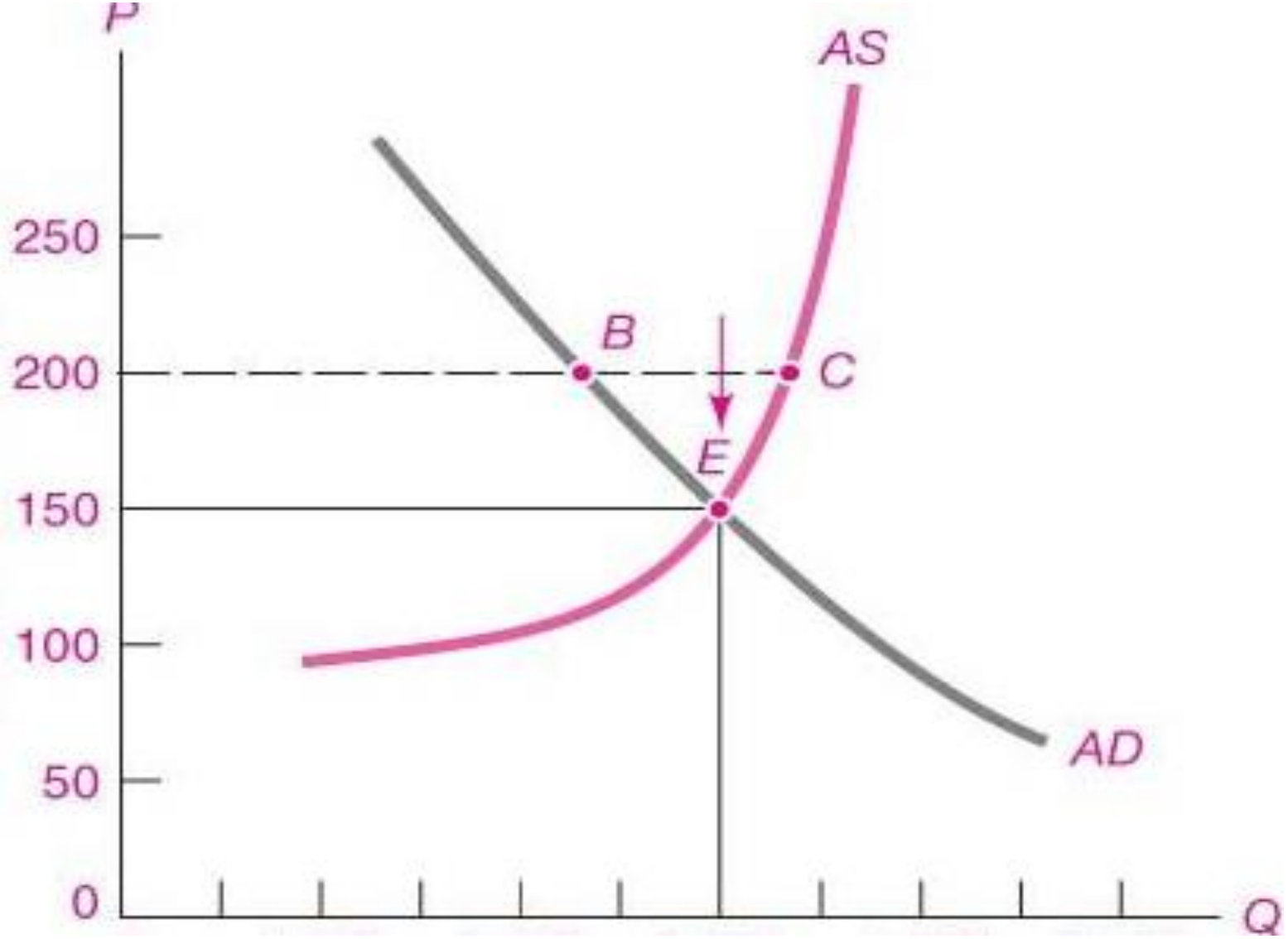
- **Refers to the total quantity of goods and services that the nations' business is willing to produce and sell during a given period.**

Potential Output: Maximum sustainable output that an economy can produce. It is determined by the availability of productive inputs and the managerial and technical efficiency with which those inputs are combined.

Macroeconomic System and Determinants of AD and AS

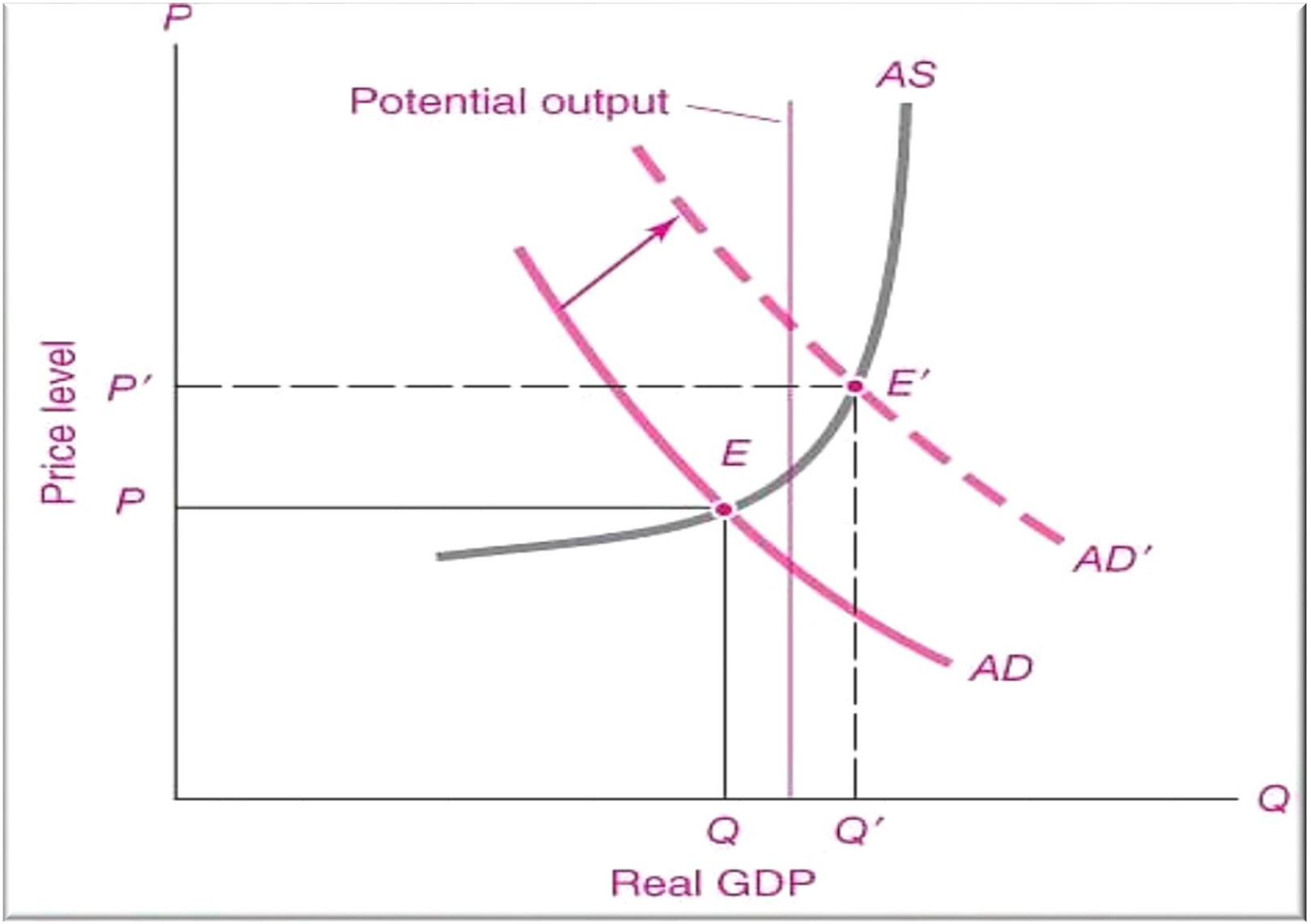


MACROECONOMIC EQUILIBRIUM

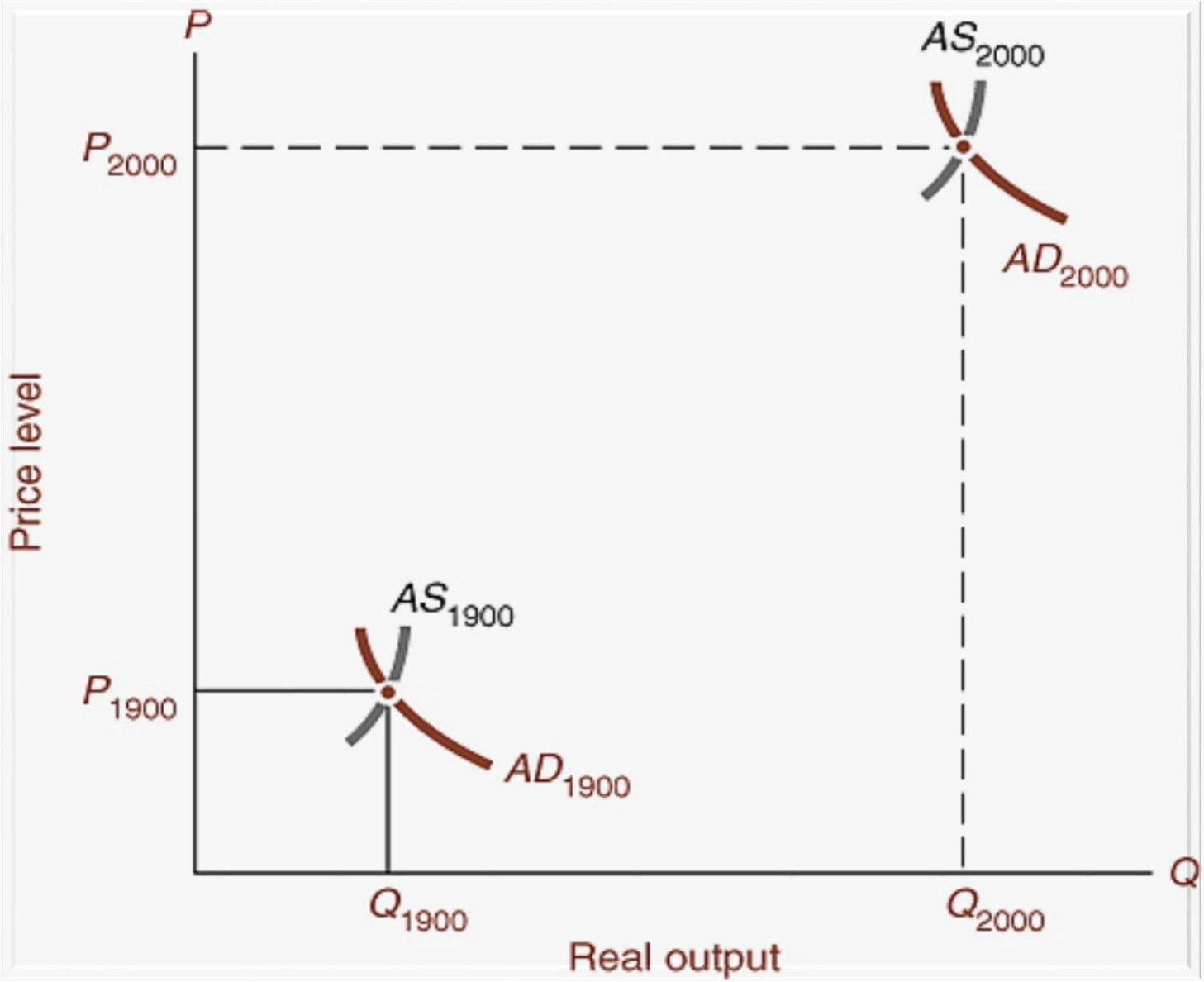


Equilibrium determination of National Income and general price level

Output can rise above the trend (or potential output) because people work overtime and machinery is used for several shifts.



Growth in Potential Output Determines Long-Run Economic Performance



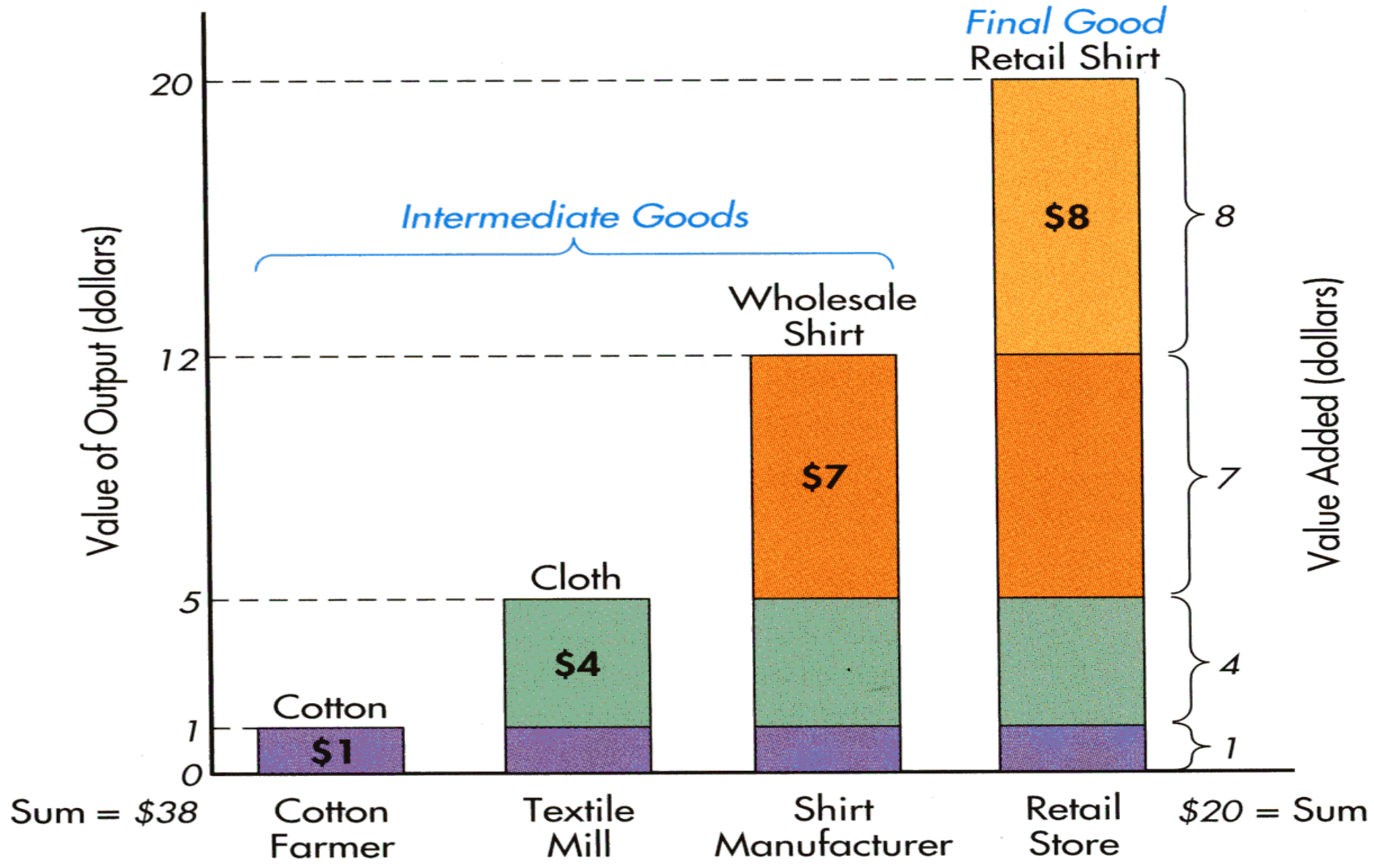
National Income Accounting

Three approaches:

- amount of output produced, excluding output used in the intermediate stages of production (Product approach);
- total income generated in the economy (Income approach);
- amount of spending by the ultimate purchasers of output (Expenditure approach).

All the three approaches give identical measurements of the amount of current economic activity.

The Concept of Value Added



Activity	Cost of Inputs	Price of Output	Value Added
Growing Oranges	$0	$1	$1
Making Orange Juice	$1	$1.50	$0.50
Distributing Juice to Stores (Wholesale)	$1.50	$2.25	$0.75
Selling Juice to Consumer (Retail)	$2.25	$3.50	$1.25

Suppose there are only two business houses: **TATA** and Birla. **TATA** owns and operates orange orchards in the *orange city*, Nagpur. It sells some of its oranges directly to the public in the market and sells the rest to **Birla**, which then produces and sells orange juice in the market.

TATA	
Wages paid to employees	Rs. 15,000
Taxes paid to the government	Rs. 5,000
Revenue received from sale of oranges	Rs. 35,000
Oranges sold to public (market)	Rs. 10,000
Oranges sold to Birla	Rs. 25,000

BIRLA	
Wages paid to employees	Rs. 10,000
Taxes paid to the government	Rs. 2,000
Oranges purchased from TATA	Rs. 25,000
Revenue from sale of orange juice	Rs. 40,000

The Product Approach (*Value Added Approach*)

***Value added*: The *value added* of an producer is the value of its output *minus* the value of the (intermediate) inputs it purchases from other producers.**

TATA produces oranges worth of Rs. 35,000 and Birla produces orange juice worth of Rs. 40,000. However, if we add these two amounts the we will '*double count*' the Rs. 25,000 which Birla purchased from TATA.

Hence, we only sum the *value added* rather than total output.

Birla's value added is: Rs. 15,000.

TATA doesn't use any inputs purchased from other businesses, so its *value added* equals its revenue of Rs. 35,000.

Total *value added* in the economy is:

Rs. 15,000 + Rs. 35,000 = Rs. 50,000

Suppose there are only two business houses: **TATA** and Birla. **TATA** owns and operates orange orchards in the *orange city*, Nagpur. It sells some of its oranges directly to the public in the market and sells the rest to **Birla**, which then produces and sells orange juice in the market.

TATA	
Wages paid to employees	Rs. 15,000
Taxes paid to the government	Rs. 5,000
Revenue received from sale of oranges	Rs. 35,000
Oranges sold to public (market)	Rs. 10,000
Oranges sold to Birla	Rs. 25,000

BIRLA	
Wages paid to employees	Rs. 10,000
Taxes paid to the government	Rs. 2,000
Oranges purchased from TATA	Rs. 25,000
Revenue from sale of orange juice	Rs. 40,000

The Income Approach

Consider the *after-tax* incomes of TATA & Birla and the total taxes received by the government.

TATA's *after-tax* profit is Rs. 15,000.

Birla's *after-tax* profit is Rs. 3,000.

Total wage income of employees is Rs. 25,000.

Government's Tax income is Rs. 7,000.

Again, we find Rs. 50,000 as the measure of total economic activity.

The Expenditure Approach

Add the amount spent by all the ultimate users of output.

Households are ultimate users of oranges. Birla is not. Because, it finally sells the oranges (in *processed, juice form*) to households.

Thus, consumers (ultimate users) purchase Rs. 10,000 of oranges from TATA and Rs. 40,000 of orange juice from Birla.

A sum total of Rs. 50,000.

Note that, all the three approaches give identical measurements of the amount of current economic activity.

Methods of Measuring Sectoral Output in India

Method / Approach	Sectors
Product Approach (*Value added* method)	Agriculture, forestry, fishing, mining, manufacturing.
Income Approach	Electricity, water supply, banking and insurance, transport, communication, real estate, hotels, restaurants, and defence, etc.
Expenditure Approach	Construction.