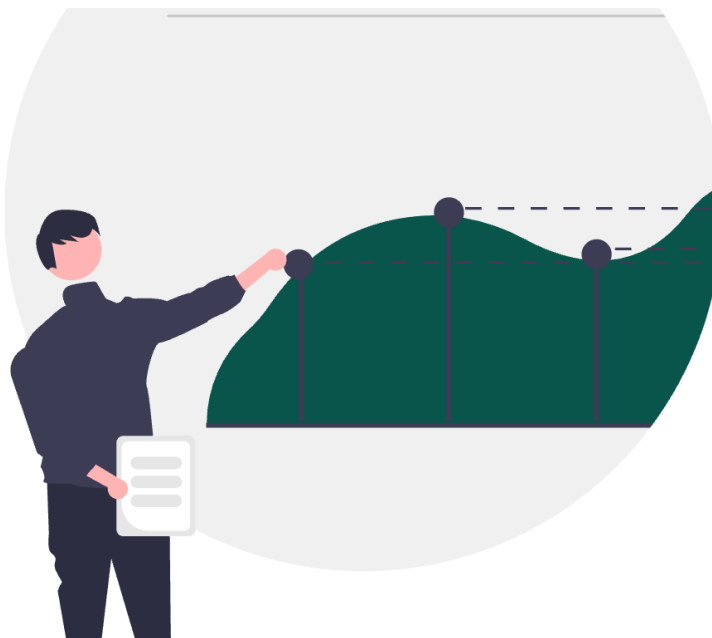


Assignment of Introduction to Macroeconomics

Assignment - 02



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Answer to the Question no 1

Circular Flow:

- Households supply factors of production (labor, land, capital) to firms in the factor market. Firms pay incomes (wages, rent, interest, profits) to households.
- Households use this income to buy goods and services from firms in the goods market; firms receive expenditure as revenue.
- The government and the rest of the world are not active in this closed economy case: there's no tax/spending leakages and no exports/imports.

Kenya's GDP and Investment Calculation:

- **Given:** Consumption = 80% of GDP; GDP = 200 shillings
 - Consumption $C = 0.8 \times 200 = 160$ shillings
- No government spending and no net exports
- By expenditure approach: **GDP = C + I**
- So, **200 = 160 + I**
=> I = 40 shillings

Answer to the Question no 2

Real and Nominal GDP for 2020 and 2022

Data from Table:

- 2020:
 - Rice: $Q = 10, P = 10 \Rightarrow 100$
 - Computers: $Q = 5, P = 20 \Rightarrow 100$
 - Security services: $Q = 0, P = 10 \Rightarrow 0$
 - **Nominal GDP 2020:** $100 + 100 + 0 = 200$
 - **Real GDP 2020 (base year):** Same as nominal, 200
- 2022
 - Rice: $Q = 15, P = 10 \Rightarrow 150$
 - Computers: $Q = 10, P = 20 \Rightarrow 200$
 - Security services: $Q = 0, P = 10 \Rightarrow 0$
 - **Nominal GDP 2022:** $150 + 200 + 0 = 350$
 - **Real GDP 2022 (at 2020 prices):**
 - Rice: $15 \times 10 = 150$
 - Computers: $10 \times 20 = 200$
 - Security: $0 \times 10 = 0$
 - **Real GDP 2022:** $150 + 200 + 0 = 350$

Answer to the Question no 3

Based on the graph (approximate readings):

- 2014: 10
- 2015: 20
- 2016: 20
- 2017: 30

Growth Rate Formula:

$$\text{Growth Rate} = ((\text{GDP}_{\text{new}} - \text{GDP}_{\text{old}}) / \text{GDP}_{\text{old}}) \times 100\%$$

$$2015 \rightarrow 2016: ((20 - 20) / 20) \times 100\% = 0\%$$

$$2014 \rightarrow 2015: ((20 - 10) / 20) \times 100\% = 100\%$$

$$2016 \rightarrow 2017: ((30 - 20) / 20) \times 100\% = 50\%$$

Answer to the Question no 4

GDP Deflator: Measures overall price change for all goods/services produced domestically.

$$\text{Formula: GDP Deflator} = (\text{Nominal GDP} / \text{Real GDP}) \times 100$$

CPI (Consumer Price Index): Measures price change for a fixed basket of goods/services bought by consumers.

$$\text{CPI} = (\text{Cost of 2010 basket at 2014 prices} / \text{Cost of 2010 basket at 2010 prices}) \times 100$$

CPI basket: Set of items consumers typically buy (e.g., rice + book)

CPI Calculation Example:

2015 and 2016: Rice price = 10, Book price = 10; Quantity of each = 20.

$$\text{Basket cost} = (10 \times 20) + (10 \times 20) = 200 + 200 = 400$$

$$\text{CPI (both years): } 400 / 400 \times 100 = 100$$

Conclusion: No inflation between these years. CPI unchanged.

Answer to the Question no 5

- Working age population: 200
- LFPR (Labor force participation rate): 20%
- Labor force: $200 \times 0.2 = 40$

Answer to the Question no 6

Given:

Equilibrium wage: 100 taka/hr
equilibrium labor: 40 people

Case 1: Minimum wage = 80 (below equilibrium)

- Firms and workers can still transact at 100, so no effect on wage or employment.
- Graph: Supply and demand curves cross at (100, 40).
- Key point: The market ignores price floors below equilibrium.

Case 2: Minimum wage = 110 (above equilibrium)

- Wage rises to 110; firms want less labor (say, A people), but more workers want jobs (say, B people)
- Graph:
 - Quantity demanded at 110 is less than 40 ($A < 40$)
 - Quantity supplied at 110 is more than 40 ($B > 40$)
 - Unemployment (excess supply) = $B - A$
- Explanation: Minimum wage above equilibrium creates unemployment.