Introduction to Macroeconomics

3 central questions in Macroeconomics

- Why do output and employment sometimes fall and how can unemployment be reduced?
- What are the sources of price inflation and how can it be controlled?
- How can a nation increase its rate of economic growth?

Objectives of macroeconomic policy

- Output: high level and rapid growth rate of output
- Employment: high level of employment with low involuntary unemployment
- Stable prices

Output

- The most comprehensive measure of total output in an economy is the GDP (Gross Domestic Product).
- GDP is the value of final goods and services produced in an economy in a year.
- Points to note in the definition of GDP: final goods, current output and market prices.
- Difference between GDP and GNP (Gross National Product)
- GNP is the value of final goods and services produced by domestically owned factors of production.
- GNP= GDP + what nationals earn abroad – what foreigners earn in the domestic economy.
- If GDP > GNP => foreigners are earning more in a country than the domestic residents of a country in foreign countries.
- GDP = C + I + G + (X-M)

Output cont.

- Nominal GDP: value of the economy’s total output at prices prevailing in the period during which the output is produced.
- Real GDP: value of the economy’s total output produced in a year at prices prevailing in the base year – provides a measure the physical change in output between specified years.

Employment

3 types of unemployment in the economy:

- Frictional unemployment : workers voluntarily quitting their jobs and looking for new jobs. May include new entrants in the job market – not able to find jobs instantaneously because of lack of information about jobs and lack of perfect mobility on part of workers.
- Structural unemployment: due to mismatch between unemployed person and demand for specific types of workers due to industrial expansion. Arises mainly due to lack of required skills by the expanding industry.
- Cyclical unemployment : due to deficient effective demand – increases during periods of recession/ depression, recedes during periods of expansion or recovery.

Price stability

- To track prices, government statisticians construct price indices, or measures of overall price level.
- Inflation or deflation rates in the economy can be determined by documenting the changes in price indices over years.
- Types of price indices:

1. CPI (Consumer Price Index): measures the cost of buying a fixed basket of goods and services representative of the purchases of the urban consumers.
2. PPI (Producers Price Index): Based on the prices received by the domestic producers of their output. Includes the cost of semi finished goods and raw materials. Does not include taxes.
3. WPI (Wholesale Price Index): based on prices of a representative basket of wholesale goods.
4. GDP Deflator: $\frac{Nominal\ GDP\ in\ a\ given\ year}{Real\ GDP\ of\ that\ year}$; measures the change in prices that has occurred between the base year and the current year.

Price Stability cont.

Difference between CPI and GDP deflator:

1. Deflator measures the price of a much wider group of goods.
2. CPI includes the prices of imports. GDP deflator includes only the prices of goods produced in a country.

Price Stability cont.

Formulae for constructing price indices:

1. Laspeyers' (L) Formula: $\frac{\sum_i p_{it} q_{i0}}{\sum_i p_{i0} q_{i0}}$
2. Paasche's (P) Formula: $\frac{\sum_i p_{it} q_{it}}{\sum_i p_{i0} q_{it}}$
3. Fisher's Formula: $\sqrt{L \times P}$

Interpretation of index value:

- Index = 110; 10% increase in prices since the base period.
- Index = 90; 10% decrease in prices compared to the base period.
- GDP deflator in 2011 is 1.22 (2006 in base year). Output is 22% higher in 2011 when valued using higher prices of 2011, than valued at lower prices of 2006. Ascribe the 22% increase between 2006 and 2011 to price inflation.

Tools of Macroeconomic Policy

- Fiscal Policy: use of taxes and government expenditures.
- Monetary policy: managing nation’s money, credit and banking system.