Economics Notes PDF

On

National Income Accounting

(Class – 12)

INTRODUCTION

This is a numerical based chapter to calculate national income by different methods (Income, expenditure and value added method, their steps and precautions). Numerically to determine private income, personal income, personal disposable income, National disposable income (net and gross) and their differences.

GOODS

In economics, goods are products and resources that meet people's needs and demands. A good can be a physical object, a man-made object, a service, or a mix of the three that can command a market price.

Types of Goods:

a. Consumption Goods:

- Consumption goods are items that are utilised directly to satisfy human demands. Consumption goods support the core goal of an economy, which is to sustain the consumption of the economy's entire population.
- These are not used in the manufacturing of other goods.
- Consumption products, often known as final goods, are intended for final consumption.
- For instance, a television, a pen, or a pair of shoes.

b. Final Goods:

- An item that is meant for final use and will not pass through any more stages of production or transformations is called a final good.
- These commodities satisfy a consumer's demands or desires.

c. Capital Goods:

- Capital goods are fixed assets which are used in the productive process in order to produce a finished 'consumer' good.
- Capital goods are not bought for their own utility; they are bought in order to be used in the productive process.
- Equipment, machinery, buildings, computers, are some common examples of capital goods.

d. Intermediate Goods:

- An intermediate good is **a product used to produce a final good or finished product**—also referred to as a consumer good. Intermediate goods like salt.
- They can also be finished products, since it is consumed directly by consumers and used by producers to manufacture other food products.

INVESTMENT

An investment is an asset or object purchased with the intention of earning income or increasing in value. When a person buys a good as an investment, the intention is not to consume the good but rather to use it to build wealth in the future.

(i) Gross Investment: A company's capital investment before depreciation is referred to as its gross investment or gross capital investment. The absolute investment value made by the company in purchasing assets each year is shown by gross investment.

(ii) Net investment: It is defined as gross investment minus depreciation on existing capital. Net investment, in a nutshell, is the increase in productive stock.
Net investment = Gross Investment – Depreciation

Depreciation: The monetary value of an asset decreases over time due to use, wear and tear or obsolescence. This decrease is measured as depreciation. Description: Depreciation, i.e. a decrease in an asset's value, may be caused by a number of other factors as well such as unfavorable market conditions, etc.

Capital Formation: Capital formation is the process of gradually increasing the stock of capital over time.

Factor Cost (FC): It refers to the amount paid to factors of production for their contribution in the production process.

Basic Prices: The basic price is the amount a producer receives from a purchaser for a unit of a thing or service provided as output, less any tax due and any subsidy due on that unit as a result of its production or sale.
Basic price = Factor cost + Production taxes – Production subsidy

Market Prices: The market price of a commodity is the price at which it is sold on the open market. It comprises the costs of production such as wages, rent, interest, input prices, profit, and so on. It also includes government-imposed levies and government-provided producer subsidies.
Market price = Basic price + Product taxes – Product subsidy

Circular Flow of Income: The continual flow of commodities and services, revenue, and expenditure in an economy is referred to as the circular flow. It depicts the circular redistribution of revenue between the manufacturing unit and households.

ECONOMIC TERRITORY
- The geographical territory managed by a government constitutes a country's economic territory.
- People, goods, and capital may freely circulate inside this zone.
- The economic territory encompasses not just land but also national air space, territorial waters, and natural oil and gas resources in international waters.

Scope of Economic Territory:
- Territorial seas and airspace are examples of political boundaries.
- Residents' ships and aircraft that travel between two or more countries.
- Embassies, consulates, military bases, and other international institutions.
- Residents operating fishing vessels, oil and gas rigs in foreign waters.

AGGREGATE OF NATIONAL INCOME
1. Gross Domestic Product at Market Price (GDP$_{MP}$): GDP$_{MP}$ is defined as the gross market value of the final goods and services produced within the domestic territory of a country during an accounting year by all production units.

(a) 'Gross' in GDP$_{MP}$ signifies that depreciation is included, i.e., no provision has been made for depreciation.

(b) 'Domestic' in GDP$_{MP}$ signifies that it includes all the final goods and services produced by all the production units located within the economic territory (irrespective of the fact whether produced by residents or non-residents).

(c) 'Market Price' in GDP$_{MP}$ signifies that indirect taxes are included and subsidies are excluded, i.e., it shows that Net Indirect Taxes (NIT) have been included.

(d) 'Product' in GDP$_{MP}$ signifies that only final goods and services have to be included and intermediate goods should not be included to avoid the double counting.

2. Gross Domestic Product at Factor Cost (GDP$_{FC}$): GDP$_{FC}$ is defined as the gross factor value of the final goods and services produced within the domestic territory of a country during an accounting year by all production units excluding Net Indirect Tax.

$$GDP_{FC} = GDP_{MP} - \text{Net Indirect Taxes}$$

3. Net Domestic Product at Market Price (NDP$_{MP}$): It is the depreciation-free market value of final goods and services produced in the country's domestic area within a year. Hence, it is the monetary worth of all final goods and services produced within a country's domestic territory within an accounting year, excluding depreciation.

$$NDPMP = GDPMP - \text{Depreciation}$$

4. Net Domestic Product at Factor Cost (NDP$_{FC}$): NDP$_{FC}$ refers to a total factor income earned by the factor of production within the domestic territory of a country during an accounting year.

NDP$_{FC}$ = GDP$_{MP}$ – Depreciation – Net Indirect Taxes NDP$_{FC}$ is also known as Domestic Income or Domestic factor income.

5. Net National Product at Factor Cost or National Income (NNP$_{FC}$)/ National Income: It is the aggregate of all factor earnings earned by ordinary people of a country in the form of wages. During an accounting year, rent, interest, and profit are calculated. It is the sum of all factor incomes earned by ordinary citizens of a nation throughout an accounting year, including employee pay, rent, interest, and profit.

NNP$_{FC}$ = GNP$_{MP}$ – Depreciation – Net Indirect Taxes It must be noted that NNP$_{FC}$ is also known as National Income.

6. Gross National Product at Factor Cost (GDP$_{FC}$) or Gross National Income GNP$_{FC}$: It refers to the gross factor value of all the final goods and services produced by the normal residents of a country during an accounting year.

GDP$_{FC}$ = GNP$_{MP}$ – Net Indirect Taxes

7. Net National Product at Market Price (NNP$_{MP}$): It is the sum of the factor incomes earned by normal citizens of a country throughout an accounting year, including net indirect taxes.

NNP$_{MP}$ = GNP$_{MP}$ – Depreciation

8. Gross National Product at Market Price (GNP$_{MP}$): GNP$_{MP}$ refers to the market value of all the final goods and services produced by the normal residents of a country during an accounting year.

GNP$_{MP}$ = GDP$_{MP}$ + Net factor income from abroad It must be noted that GNP$_{MP}$ can be less than GDP$_{MP}$ when NFIA is negative. However, GNP$_{MP}$ will be more than GDP$_{MP}$ when NFIA is positive.

Real, Nominal Aggregates, Activities Excluded From GDP And Does GDP Measures Social Welfare:

1. National Income at Current Prices:
- When products and services generated by ordinary inhabitants within and outside of a country in a year are evaluated at the current year's values, i.e., current prices, this is referred to as national income at current prices. I
- It is also referred to as nominal national income.
  Y = Q x P
  Here,
  Y = National income at current prices.
  Q = Quantity of goods and services produced in an accounting year.

P = Prices of goods and services during the current accounting year.

2. National Income at Constant Price:
- If national income is calculated on the basis of base year price index, then it is known as National income at constant price.
- It is also called Real National Income as it fluctuates due to the fluctuation in the flow of goods and services and price remains constant.
- It is also referred to as actual national income.
  Y' = Q x P'
  Here,
  Y' = National income at constant prices.
  Q = Quantity of goods and services produced during an accounting year.
  P' = Prices of goods and services prevailing during the base year.

3. GNP at current MP:
3. GNP at current MP: When final goods and services included in GNP are valued at current MP, i.e., prices prevailing in the year for which GNP is being measured, it is called GNP at current MP or Nominal GNP.

4. GNP at constant MP: When final goods and services included in GNP are valued at constant prices, i.e. prices of the base year, it is called GNP at constant MP or Real GNP.

5. GVA at basic prices:
- GVA at basic prices does not include product subsidies but does incorporate production taxes.
· GVA at basic prices = GVA_{MP} - Net Production Taxes

6. GNP Deflator:
- GNP Deflator measures the average level of the prices of all the final goods and services that are produced within the domestic territory of an economy including NFIA.
- GNP deflator is measured as the ratio of nominal GNP to real GNP, multiplied by 100.

GDP AND WELFARE

GDP:
- It is a measure of the economic value of all final goods and services produced within a specific time period, which is typically annually or quarterly.
- A greater GDP suggests that more products and services are produced. It indicates the increased availability of goods and services, but this does not always imply that people were better off throughout the year.

GDP is classified into two categories-

1. Real GDP:
Real gross domestic product (real GDP) is an inflation-adjusted estimate of the value of all goods and services generated by an economy each year. It is also known as "constant-price" or "inflation-corrected" or "GDP at constant prices".
It is exclusively affected by changes in physical output, not by changes in the price level. It's referred to as a true indication of economic advancement.
Real GDP= Nominal GDP Deflator

2. Nominal GDP:

The products and services produced by all producing units in a country's domestic territory during an accounting year and valued at the current year's prices or current prices are referred to as nominal GDP or GDP at current prices.

Changes in both physical output and the price level have an impact on it. It is not regarded as a reliable indicator of economic advancement.

Nominal GDP = Real GDP x GDP Deflator

Conversion of Nominal GDP into Real GDP

Real GDP=Nominal GDP Price Index x 100

GDP Deflator:
- The nominal-to-real GDP ratio is a well-known price index. This is known as the GDP Deflator.
- Thus,

If GDP denotes nominal GDP and gdp denotes real GDP,

Then;

GDP Deflator = $\underline{GDP}$
                     gdp

GDP Deflator = $\underline{GDP}$ × 100
                     gdp

WELFARE
- People's material well-being is referred to as welfare. It is determined by a variety of economic elements such as national income, consumption level, product quality, etc, as well as non-economic factors such as environmental pollution, law, and order, and so on.
- Economic welfare refers to welfare that is dependent on economic variables, whereas non-economic welfare refers to welfare that is dependent on non-economic elements. Social welfare is defined as the sum of economic and non-economic well-being.
- Thus, GDP and welfare are directly associated, however, this relationship is incomplete because of the following limitation:

Limitations of using GDP as an index of welfare of a country:
- Many goods and services contributing economic welfare are not included in GDP or Non-Monetary exchanges.
- Externality.
- Change in the distribution of income (GDP) may affect welfare.
- All products may not contribute equally to economic welfare.
- Contribution of some products may be negative.

METHODS OF CALCULATING NATIONAL INCOME

(a) Product Method/ Value Added Method:

It refers to a firm's production activities that add value to raw materials (intermediate goods). Alternatively, value added is defined as an enterprise's contribution to the present flow of products and services. To put it another way, the term "value added" is used to describe a company's net contribution.

As a result,

Value added of a firm = Value of Output– Value of intermediate goods used by the firm.

Here,

Value of output:

- An enterprise's output is the commodities and services it produces during an accounting year. The market worth of all goods and services generated by a firm throughout an accounting year is referred to as the value of output.

Value of Output = Quantity of output x Price

Or

Value of output=Sales + Δ Stock

Change in Stock: It is calculated as;

Δ Stock=Closing Stock− Opening Stock

(b) Expenditure Method:

The expenditure method of calculating national income focuses on the expenditures. Now expenditure refers to all the purchases made by residents, government, or business enterprises. The expenditure method takes the following elements into consideration:

- Purchase of consumer goods and services by residents and households (C)
- Government expenditure on goods and services (G)
- Business enterprises' expenditure on capital goods and stocks (I)
- **Net exports:** The difference between exports(X) and imports(M).

     Formula

     GDP_{Mp} = C + I + G + (X – M)

     Here,

     C = consumer spending on different goods and services,

     I = investments made by businesses, and on capital goods,

     G = government's spending on goods and services provided to the public,

     X = exports, and

     M = imports.

(C) Income Method:

The income method of calculating national income focuses on the production perspective. Now production of goods and services involves the use of land, labour, capital, and so on. And if we consider these factors of production, income is generated via rent, wages and salaries, profits, and interest. We can then calculate the national income by adding all these types of income. Another important source of income is mixed income. Mixed income refers to the income generated by self-employed professionals and sole proprietors.

According to the income method: National Income = Rent + Wages + Interest + Profit + Mixed-Income

CLASSIFICATION OF FACTOR INCOMES

1. Compensation of Employees: It comprises salary and wages earned in return for the services and talents you give in the production of goods and services. Travel allowances, bonuses, lodging allowances, and medical expenses are also included. It includes,

- Wages and salaries
- Payment in kind
- Pension

- Employers contribution

2. Operating Surplus: The CSO (Central Statistical Organization) has defined operating surplus as "value of gross output less the sum of intermediate consumption, compensation of employees, mixed income, depreciation and NIT."

Operating Surplus = GVOMP – Intermediate consumption – COE – Mixed Income – Depreciation – NIT

It is divided into three components:

- **Rent:** The income arising from ownership of land and building is known as rent. It also includes imputed rent. If a person lives in his own house, then it is assumed in an economy that he is paying rent to himself. This concept is known as imputed rent.
- **Royalty:** Royalties are the payments made for the use of mineral deposits such as coal, oil, etc. or for the use of patents, copyrights, trademarks, etc.
- **Interest:** It is the amount earned for lending funds to the production units. It also includes imputed interest of funds provided by entrepreneurs. But interest income includes interest on loans taken for productive services only.

3. Mixed Income: Income of own account workers (like farmers, doctors, barbers, etc.) and unincorporated enterprises (like small shopkeepers, repair shops) is known as mixed income. They do not maintain proper accounts. They do not generally hire factor services from the market rather use their own resources like land, labour, funds, etc. As a result, it becomes difficult to classify their income distinctly among rent, wages, interest and profit.

Note: NDPFC = Rent + Compensation + Interest + Profit + Mixed income.