PART - II

Chapter 8

BASIC CONCEPTS OF NATIONAL INCOME

8.1 Meaning of National Income

It is necessary to describe the meaning of income before understanding the concept of national income.

A reward or earnings that a person receives as a result of his mental or physical efforts is called income. A nation earns its income with the help of four important resources are called factors of production. These factors of production are land, labour, capital and entrepreneur. National income includes payments made to all these factors of production in form of rent, wages, interest and profit. Factors of production receive payments by producing goods and services; therefore money value of goods and services is also called national income.

8.2 Definition of National Income

As stated earlier, national income is the "total income which is earned by the individuals or four factors of production (land, labour, capital and organization) for producing goods and services in a year. Prominent economists have defined national income in their own way. We shall study here definitions offered by two famous economists, Alfred Marshall and Paul A. Samuelson.

According to Alfred Marshall, "**the labour and capital of a country acting on its natural resources produce annually a certain 'net' aggregate of commodities (material and immaterial) including all kinds of services. This net aggregate is called national income**".

In other words, Alfred Marshall describes national income as the money value of all goods and services produced by four factors during a particular year. Examples of goods produced are cereals, machinery, petroleum products and metals whereas services are performed by professionals like doctors, engineers, lawyers, clerks and accountants etc.

According to Paul A. Samuelson, **"The nominal value (face value) of all goods and services produced in a country during the course of one year is known as national income"**.

According to the definition of Paul A. Samuelson, certain points should be kept in mind when determining national income; firstly: national income is the nominal flow of goods and services produced in the country during the course of one year; secondly: national income can only be determined in the form of money value because it is difficult to express it in any other form or measuring units.

8.3 Various Concepts of National Income

National income has further been classified into following categories:

1.	Gross Domestic Product	(GDP)
2.	Gross National Product	(GNP)
3.	Net National Product	(NNP)
4.	National Income	(NI)
5.	Personal Income	(PI)
6.	Disposable Personal Income	(DPI)

(1) Gross Domestic Product (GDP)

'Gross Domestic Product' (GDP) measures the output by factors of production located in domestic economy regardless who owns the factors.

For example, incomes of all persons working in a multinational company (Say, Pak Suzuki Motor Company Limited) set up within geographical boundaries of Pakistan shall be included in the country's gross domestic product. It may be noted that income of all persons, whether Pakistanis or foreign nationals, in return for rendering services in Pakistan shall be included in Pakistan's gross domestic product. Similarly, income earned by Pakistanis working in other countries shall not be included in Pakistan's gross domestic product even if they remit money to their homeland. It is because services to earn such income have not been provided within Pakistan's geographical boundaries. Such income shall, however, be included in the gross domestic product of the country where Pakistanis have provided their services.

Therefore, gross domestic product (GDP) is the **'total market value of all final good and services produced within the country in one year'.**

(2) Gross National Product (GNP)

'Total market value of all final goods and services produced by the people of a country, whether within geographical boundaries of the country or otherwise, in one year is called Gross National Product (GNP).

People of a country use their natural and capital resources to produce goods in form of agriculture produce (for example: cereals, vegetables and fruits etc.), mineral exploration (for example: petroleum, iron and copper etc.), industrial outputs (for example: machinery, cement and sugar etc.) and services rendered (for example: lawyers, doctors and accountants etc.). We can find gross national product of a country by adding values of goods produced and services rendered by the people during a year within and without geographical boundaries of the country.

According to Professor Stanley Fischer, **Gross National Product measures the sum of money value of goods and services produced by productive resources of a country during certain period of time**.

Gross national product (GNP) is a term different from gross domestic product (GDP) with respect to inclusion of services provided in other countries. In GNP, remittances/services by persons in foreign countries are included whereas GDP excludes such portion of income and restrict itself to income earned by people within geographical limits of the country. Numerically, GNP can be expressed as:

GNP = GDP + Remittances sent to homeland by citizens serving abroad – Remittances sent out of the country by foreign national serving in the country

Following precautions are necessary for correct computation of GNP:

i. All goods and services should be counted once in any given year. To avoid risk of multiple counting, market value of final goods should be taken. For example, market value of shirt (final product) should be included instead of including market value of cotton, yarn or cloth used in making the final product.

ii. Market value of all goods and services produced in a country in the current year only should be included

iii. Remittances/income by citizens serving abroad should be included in GNP while remittances sent out of country by foreign nationals serving in the country should be excluded.

(3) Net National Product (NNP)

A number of plants, machinery, tools and equipments etc. are used in the manufacturing process to produce goods. These Capital Resources etc. depreciate with the passage of time due to usage and wear and tear. Money is spent to keep them in perfect operating condition so that production of goods is not disturbed. The amount spent for repair and maintenance of plant/machinery etc is called capital consumption allowance (CCA) or depreciation allowance.

If we deduct capital consumption/depreciation allowance (expenditure on maintenance of production plant/equipment etc) from gross national product, we can get net national product. Following equation shows relationship between net national product and gross national product:

NNP = GNP – Depreciation/capital consumption allowance

(4) National Income (NI)

National income is the total amount earned by all factors of production, in a year, for their services. The income of factors of production is in form of rent (from land), wages (from labour), interest (from capital) and profit (from organization).

National income can be computed at factor cost basis, by deducting all indirect taxes (excise/custom duty etc) from NNP and adding subsidies to it. Relationship between NNP and NI is explained by the following equation:

National Income = NNP – Indirect taxes + Subsidies

(5) Personal Income (PI)

Personal income is aggregate of all incomes actually received by all individuals and households during one year. It is a point to be noted that national income is always greater than personal income because certain deductions are required to be made from national income to determine personal income because all income earned by individuals is not distributed among them.

Following deductions are made from national income to arrive at personal income:

i. Undistributed profits of joint stock companies
ii. Social security and other compulsory welfare contributions
iii. Taxes and other levies on profits of joint stock companies

Some individuals and households receive transfer payments which they have not earned currently; for example unemployment allowance, old-age pension and relief aid etc. Such transfer receipts are, however, included in personal income. Personal income can be put in the form of an equation in the following way:

PI = NI – Corporate taxes – Undistributed profits – Social Security contributions + Transfer payments

(6) Disposable Personal Income (DPI)

Disposable personal income is the income which is available with an individual after payment of all taxes and levies, such as income tax, property taxes etc. A portion of the income left with an individual, after payment of taxes, is consumed and a part of it is saved. In form of equation, disposable personal income can be expressed as:

a. Disposable Personal income = PI – Direct taxes
b. Disposable Personal Income = Personal Consumption + Personal Saving

Illustration Explaining Various Concepts of National Income (With hypothetical figures)

Sr. No.	Description		Money Value Billion Rs.*
1.	Gross Domestic Product – GDP		900
	Add: Remittances received from abroad	+	60
2.	Gross National Product – GNP	=	960
	Less: Depreciation/Capital Consumption Allowance	–	20
3.	Net National Product – NNP	=	940
	Add: Subsidies by the government	+	5
	Less: Indirect Taxes and Levies	–	10
4.	National Income [at factor cost basis] – NI	=	935
	Add: Transfer Payments	+	20
	Less: Undistributed profits	–	20
	Less: Taxes/Levies on Corporate Profit	–	15
	Less: Compulsory Social Security/ Welfare Contributions	–	10
5.	Personal Income – PI	=	910
	Less: Direct Taxes	–	10
6.	Disposable Personal Income – DPI	=	900
	Less: Personal Consumption/Expenditure	–	850
7.	Personal/Private Savings	=	50

(*) Money value is hypothetical.

8.4 Per Capita Income

Per capita income of a person means the income which one gets in a year. Per capita income in an economy can be arrived at by dividing national income (NI) by the population of that country, as under:

$$\text{Per Capita Income} = \frac{\text{National Income}}{\text{Total Population}}$$

According to figures reported in Pakistan's Economic Survey 2021-22, its per capita income stands at US Dollars 1658.36.

Per capita income of a country not only represents standard of living of its people but also helps to measure economic development of that country as compared to other countries. High per capita income of a country means high standard of living of the people of that country. Consequently, people of that country enjoy the benefits of comforts of life.

Conversely, countries with low per capita income do not have all comforts of life and even may not have full access to basic necessities of life such as clean/safe drinking water, education and medical care etc.

8.5 Consumption of Wealth

Consumption of wealth plays an important role in all economic activities in a country. In terms of Economics, it means that portion of a person's income which he spends on consumers goods to get direct satisfaction.

Consumption of wealth depends upon levels of income of the people. A rise in income level increases consumption of wealth. In other words, consumption is a function of income. Following equation expresses relationship between income and consumption:

$$C = f(Y)$$

C is consumption and Y is income.

The above equation shows that a change in income brings about a change in consumption. This functional relationship between income and consumption is positive in its nature. An increase in income increases consumption and decrease in income decreases consumption.

Consumption patterns are of two types:

(i) Autonomous Consumption

Consumption which is independent of level of income is called autonomous consumption. These expenditure may continue even at zero income level.

(ii) Induced Consumption

Consumption which varies with change in income level is called induced consumption. It increases with increase in income and decreases with decrease in income.

8.6 Savings

Positive difference between income and consumption level is called saving. For example, if a person earns Rupees 10,000 and consumes Rupees 9,000, his saving would be Rupees1,000.

Savings plays a very significant role in economic development of a country. High ratio of saving encourages investment in a country. Volume of savings depends upon two major factors:

i. Power to save

ii. Will to save

As, in case of consumption, rate of saving also depends upon level of income. There is an increasing functional relationship between income and saving. It increases with rise in income and declines with fall in income. This relationship can be expressed as:

$$S = f(Y)$$

S is saving and Y is income.

8.7 Investment

Investment plays an important role in economic development of an economy. Increase in volume of investment will raise level of national income. It should be borne in mind that investment depends on the rate of savings. Higher savings rate means increased volume of investment. More investment will, in turn, boost national production and consequently per capita income will rise. Investment results in formation of new sources of production which adds to national capital assets.

For example, purchase/construction of a new building for renting out or setting up a factory is an investment whereas purchase of an old house or factory will not be included in the term 'investment'. Investment can be divided into following two types:

(i) Autonomous Investment

Investment which is not dependent on level of income is called autonomous investment. Examples of investment falling under this category are expenditures on construction of dams, roads, healthcare/education facilities and public utilities.

(ii) Induced Investment

Investment which responds to any change in level of national investment is called induced investment. Such investment increases with increase in income level and decreases with decline in income.

To clearly understand the above two types of investment, consider example of Pak Suzuki Motor Company Limited which was the first car manufacturing plant in Pakistan. However, with afterward increase in income level of the people raised demand for cars in Pakistan. This rise in demand encouraged not only Pak Suzuki Motor Company Limited to set up additional production facilities to satisfy increasing demand but also attracted other car manufacturers (Toyota, Honda and Hyundai) to establish factories in Pakistan. In this case, investment made to set up first plant in Pakistan comes under the category of 'autonomous' whereas subsequent investment in additional/new plants to satisfy rising demand of cars is classified as 'Induced'.

Exercise

Q.1 Each statement has four possible answers. Tick (✓) the best one:

1. Basically, national income is the sum of:
   - a. Money value of goods and services
   - b. Country's national resources
   - c. Income from government taxes
   - d. Value of industrial and agricultural goods
2. Which one of the following is called per capita income:
   - a. Annual income per person
   - b. Annual income per family
   - c. Monthly income per family
   - d. Monthly income per person
3. What is deducted from gross national product to get net national product:
   - a. Indirect taxes b. Government subsidies
   - c. Depreciation allowances d. Transfer payments
4. Which of the following is not related to disposable personal income?
   - a. Income received from scholarships
   - b. Zakat payments
   - c. Income received from gifts
   - d. Total Income of a clerk
5. In any country, investment depends upon:
   - a. Weather conditions
   - b. Business conditions
   - c. National savings
   - d. Consumption

Q. 2 Complete the following statements by filling in the missing words or phrases:

1. Per capita income is derived from dividing national income by ....
2. Total income of factors of production is always equal to the .... of goods and services.
3. .... income of a country represents standard of living of its people.
4. Unemployed and needy person gets .... from government without rendering any service.
5. The amount spent for repair and maintenance of plant and machinery is called ....

Q. 3 Match the statement in column A with statement in column B; choose the best answer to write in column C:

A	B	C
Reward of physical and mental labour is	Government allowances	
Per capita income is equal to	Zakat and gifts etc	
Subsidies are	Income	
Transfer payments are	Total National Income / total population	
Services without payments like	Ironing one's own clothes	

Q. 4 Answer the following questions in three sentences:

1. What does personal income mean?
2. What is difference between gross domestic product and gross national product?
3. What does net national product mean?
4. What is difference between income and transfer payments?
5. What does disposable personal income mean?

Q. 5 Answer the following questions in detail:

1. Define and explain concept of national income.

2. Explain various concepts of national income.
3. What is meant by per capita income? Also explain economic significance of transfer payments and depreciation allowances.
4. Explain the following economic concepts and establish relationship between them with the help of examples:
    a. Consumption b. Savings c. Investment