

Concepts of National Income:

There are various concepts of national income. These are explained below one by one:

- (1) Gross National Product (GNP).
- (2) Net National Product (NNP)/National Income.
- (3) Gross Domestic Product (GDP).
- (4) National Income at Factor Cost.
- (5) Personal Income.
- (6) Disposable Personal Income.

(1) Gross National Product (GNP):

Gross National Product at Market Price:

Definition and Explanation of GNP:

The concept of gross national product (GNP) is comprehensive. It enables us to measure and analyze as to how much is the aggregate economic production of a country in a given period.

The gross national product of a country (GNP) is defined as:

"The total money value of all final goods and services produced by the residents of a country in one year period".

In the words of W.C. Peterson:

"Gross national Product may be defined as the current market value of all final goods and services produced by the economy during an income period regardless of where the output is produced".

we should remember the following aspects about GNP.

- (i) GNP is a flow concept: GNP represents a flow. It is a quantity produced per unit of time. It is the value of final goods and services produced in a country during a given time period.
- (ii) GNP measures final output: While calculating GNP, the market value of only final goods and services produced in a year are added up. Final goods are those goods which are purchased for final use in the market.
- (iii) GNP is output produced by the citizens of a country: Gross national product is the final output of goods and services produced by the citizens and businesses of a country during a given time period which is usually a year. For example, the economic activity carried out by the USA citizens and businesses outside the country is counted in GNP. While the income of the residents who are not USA citizens is subtracted from GNP.

Components of Expenditures in GNP:

For measuring GNP at market price, the economists use Expenditure Approach. According to this approach:

There are four categories of expenditures which are added together to measure gross national product (GNP) at market price, (i) Consumption, (ii) Investment (iii) Government expenditure and (iv) Net exports.

These four types of expenditures are now explained in brief:

- (i) Consumption Expenditure (C): It includes all personal expenditure incurred by the citizens of a country on durable and non-durable goods in a period of one year.
- (ii) Investment (I): It is the total expenditure incurred by firms or households on capital goods.

(iii) Govt. expenditures (G): It includes all types of expenditure incurred by Federal, Provincial, Local Councils on the purchases of goods and services such as national defense, law and order, street lighting etc.

(iv) Net Exports (X - M): Net exports of goods and services are value of exports minus the value of imports.

Formula For Gross Profit:

$$\text{GNP} = C + I + G + (X - M)$$

Where:

C = consumption, I = investment, G = Govt. expenditure and X - M = Net exports

(2) Net National Product (NNP)/National Income:

Definition and Explanation of NNP:

"Net national Product or national income at market prices is the net market money value of all the final goods and services produced in a country during a year. It is found out by subtracting the amount of depreciation of the existing capital in a year from the market value of all final goods and services".

For a continuous flow of money payments, it is necessary that a certain amount of money should be set aside from the gross national income for meeting the necessary expenditure of wear and tear of all capital equipment so that there should not be any deterioration in the capital and it should remain intact. If we deduct depreciation allowance from gross national product, we get Net National Product at current market price.

Formula For Net National Product/National Income:

$$\text{NNP at Market Price} = \text{GNP at Market Price} - \text{Depreciation}$$

Depreciation Allowance and Maintaining Capital Intact. Here a question can be asked as to what we actually mean by depreciation allowance and maintaining capital intact; (the words which we have used in explaining NNP).

It is known to every one of us that when production is going on, the value of capital equipments does not remain the same. A decrease in value because of wear and tear through, use, rusting, accident or through actions of elements, gradually take place in the building and other equipments of business. A certain sum of money based on the value of the capital equipment and its longevity is set aside every year from the gross annual income so that when machinery is worn out, a new capital equipment can be set up from the sum thus accumulated. This fund which is set aside for covering the wear and tear, deterioration and obsolescence of the machinery is named as Depreciation Allowance. We can make this concept more clear by taking a simple example.

Example of NNP:

Suppose, a person buys a machinery for manufacturing cloth for \$10000 only. He expects that this machinery will last ten years and after that period, it will be partially or completely worn out. He sets aside \$1000 every year from the gross national income as a depreciation reserve of the capital equipment.

After the expiry of ten years, he accumulates \$10000 and with that money he replaces the old capital equipment which has lived its useful life and maintains capital intact. The sum of money, i.e., \$1000 which he annually deducts from the gross annual income, is known as depreciation allowance.

It is often pointed out by economists that the calculation of depreciation allowance every year is a difficult task.

For example, a person expects the longevity of the capital equipment, say for ten years. There is a possibility that machinery may last longer or it may go out of use earlier. So they say what needed is an approximate decision regarding the depreciation allowance. This decision should be based on high degree of judgment and guessing about the future.

Maintaining Capital Intact. By maintaining capital intact we do not mean that capital equipments should remain the same. It should neither increase nor decrease. This can only be possible in a static society. In a progressive society, the total capital equipment of a country must increase every year, otherwise the national income will be affected adversely.

In Economics, by the phrase 'maintaining capital intact' is meant to make good the physical deterioration which has taken place in the capital equipment while creating income during a given period. This can only be made by setting aside a certain amount of money every year from the annual gross income so that when the income creating equipment becomes obsolete, a new capital equipment may be created out. If the depreciation allowance is not set aside every year, the flow of income would not remain intact. It will decline gradually and the whole country will become poor.

$NNP = GNP - \text{Depreciation}$

(3) Gross Domestic Product (GDP):

Definition and Explanation of GDP:

It is a key concept in the national income. "Gross domestic product (GDP) is the total market value at current prices of all final goods and services produced within a year by the factors of production located within a country".

The labor and capital of a country working on its natural resources produce a certain aggregate of commodities, material and non-material every year. In addition to this, there may be foreign firms producing goods in the various sectors of the economy like mining, electricity, manufacturing etc.

If we add up the money value of all the final goods produced both by domestic and foreign owned factors annually in the country and valued at market prices, it will be called gross domestic product (GDP). Gross Domestic Product thus is the value of aggregate or total production of goods and services in a country in one year. This constitutes the Gross National Product, of a country. If we make a detailed list of all such commodities produced annually or measure the total goods produced during a year by weight or by volume, it will not give us any clear and concise impression about our total national output. So what is generally done is that the money value of all final goods and services produced during a year at current market prices is added up. This total current market value of all final goods and services produced in an economy in one year period is called gross domestic product (GDP). In the words of Campbell: "Gross Domestic Product is defined as the total value of all final goods and services produced in a country in one year".

According to Shapiro:

"GDP is defined as a flow variable, measuring the quantity of final goods and services produced during a year".

Problems in Measuring GDP:

The main problems or pitfalls which are to be avoided in the measurement of GDP are as under:

(i) Stress on final output. While calculating the gross domestic product (GDP), the value of only those goods are added which have reached their final stage of production and are available for consumption. The primary or intermediate goods are not counted in GDP. For example, table made of wood is the final product. The wood used in making the table is a primary good. While calculating GDP, if we include the value of wood as a separate item and the value of table separate, it will be a case of double counting and this leads to inflated rise in GDP.

(ii) Value added method. Another way to avoid pitfall of double or multiple counting is to calculate only the added value of a particular commodity at its every stage of production. The result in both the cases will be the same.

Suppose, the price of book which you are reading is \$10. This includes the cost of paper, printing and binding charges, etc., While estimating the gross domestic product, there are two ways open to you. Either you include the final price of the book at one time in gross domestic product or you add up the added value at every stage in the process of the production of the book. But you are not to count the value of a thing more than once.

From the following example, the reader can easily understand as to how the danger of double or multiple counting can be avoided.

Stage of Production	Form of the Product	Price at Each Stage (\$)	Value Added at Each Process (\$)
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1st	Jungle Wood	0.25	0.25
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2nd	The price of wood after transporting to the city	0.38	0.13
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3rd	Paper manufacturing	2.00	1.62
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4th	Printing of book	5.00	3.00
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5th	Binding and title, etc.	6.00	1.00
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6th	Sale price	10.00	4.00
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		\$23.63	\$10.00
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From the above example, it is clear that if we add up the value of the product at every stage of production, the total value of the book comes to \$23.63, while in fact it is priced at \$10 only.

So we come to the conclusion that while adding the value of the book to the gross national product, we should either include the final price of the book which is \$10 or we should add up the added value at each stage in the process of production. But we are not to count the value of a particular commodity more than once. If we do so, the gross product will be overestimated.

The computation of GDP by this method is not popular.

(iii) Non-Productive transactions are excluded from GDP. In order to measure the economic well being of a society in a year, the non-productive transactions are excluded from the Gross Domestic Product. There are two major types of non-productive transactions, namely: (a) Purely financial transactions and (b) Second hand sales. Under purely financial transaction (i) all public transfer payments which do not add to the current flow of goods such as social security payments, relief payments and (ii) all private financial transactions such as receipt of money by a student from his father which make no contribution in current production are all excluded from GDP. Similarly, the second hand sales are excluded from GDP as they do not contribute to current production in a year.

(iv) Other transactions. There are a few other transactions which are not included in GDP. For example, persons working in their own houses without any payment through the market. For example, a house wife takes care of house and children. Since she is not paid, therefore, the value added by her is not included in GDP.

Exclusion of output production abroad. GDP is the value of output produced by factors of production located within a country. It excludes the output produced abroad by domestically owned factors of production.

Distinction Between GDP and GNP:

Here it seems necessary to make a distinction between gross domestic product (GDP) and gross national product (GNP). Gross domestic product is the total market value of all final goods and services produced by factors of production within a nation's border during a period of one year. In other words GDP is a flow of production produced within the country by domestically located resources in a year.

Gross national product (GNP) on the other hand, is the measure of all final goods and services produced by the citizens within their own country as well as outside the country during a period of one year. In other words, GNP expresses the money value of flow of goods and services produced within the country and the net income received from abroad during a period of one year. Thus when we move from GDP to GNP, we add factor income receipts from foreigners and subtract factor income payments to foreigners.

Formula For GDP:

$$\text{GDP} = \text{GNP} - \text{Net Foreign Income From Abroad}$$

(4) National Income at Factor Cost:

Definition and Explanation:

National income can be estimated in terms of either output or total income. When national income is measured by adding together all income payments made to the factors of production in a year, it is called national income at factor cost. National income thus is the sum total of all income payments made to the factors of production. In the words of J. Sloman:

"National income (NI) or national income at factor cost is the aggregate earning of the four factors of production (land, labor, capital and organization) which arise from the current production of goods and services by the nations' economy".

Components of National Income at Factor Cost:

The main components of national income at factor cost are as follows:

The factor incomes are generally divided into four categories:

(i) Compensation to employees (ii) Interest (iii) rents and (iv) profits.

(i) Compensation to employees: It is the largest component of national income. It consists of wages and salaries paid by the firms to the workers for their labor services.

(ii) Interest: Interest is the payment for the use of funds in a year. The payment is made by private businesses to households who have lent money to them.

(iii) Rent: Rent is all income earned by individuals for the use of their real assets such as building, farms etc.

(iv) Profit: Profit is the amount which is left after compensation to employees, rent, interest have been paid out. The sum of compensation to employees, interest, rent and profit is supposed to equal national income at factor cost.

(5) Personal Income:

Definition and Explanation:

National income is the sum of factor income. In other words, it is the income which individuals receive for doing productive work in the form of wages, rent, interest and profits. Personal income, on the other hand, includes all income which is actually received by all individuals in a year. It includes income which is not directly earned but is received by individuals.

For example, social security payments, welfare payments are received by households but these are not elements of national income because they are transfer payments.

In the same way, in national income accounting, individuals are attributed income which they do not actually receive. For example, undistributed profits, employees contribution for social security corporate income taxes etc. are elements of national income but are not received by individuals. Hence they are to be deducted from national income to estimate the personal income.

Formula For Personal Income:

$PI = NI + \text{Transfer Payments} - \text{Corporate retained earnings, income taxes, social security taxes}$

(6) Disposable Personal Income:

Definition and Explanation:

Disposable personal income is the amount which is actually at the disposal of households to spend as they like. It is the amount which is left with the households after paying personal taxes such as income tax, property tax, national insurance contributions etc.

Formula For Disposable Personal Income:

$\text{Disposable personal income} = \text{Personal Income} - \text{Personal Taxes}$

$DPI = PI - \text{Personal Taxes}$

The concept of disposable personal income is very important for studying the consumption and saving behavior of the individuals. It is the amount which households can spend and save.

$\text{Disposable Income} = \text{Consumption} + \text{Saving}$

$DI = C + S$