National Income

National income is an uncertain term which is used interchangeably with national dividend, national output and national expenditure. On this basis, national income has been defined in a number of ways. In common parlance, national income means the total value of goods and services produced annually in a country.

In other words, the total amount of income accruing to a country from economic activities in a year's time is known as national income. It includes payments made to all resources in the form of wages, interest, rent and profits.

National Income is the sum total of factor incomes earned by normal residents of a country during the period of an accounting year as a result of their productive services. This definition of national income offers two important observations:

i. National Income includes **factor incomes** only
ii. National Income includes income of only the **normal residents of a country**

According to **Shapiro**, "National Income is the sum of wages, rent, interest and profit or sum of the earnings of the factors of production."

In the words of **Brooman**, "National product is the sum of total value of final goods and services produced by labor and wealth of a nation during a period of one year."

Concepts Related to National Income

1) Factor Incomes

Factor incomes are related to factor of production like land, labor, capital and entrepreneurship. Factor incomes are broadly classified as:

- **Compensation of employees** received by the households for rendering their services as employees of the producing units.
- **Rent** received by the households for the use of their land by the producing units.
- **Interest** received by the households for the use of their capital by the producing units.
- **Profit** received by the households for the use of their entrepreneurial skills by the producing units.

2) Domestic territory of a country

In common language, the domestic territory of a nation means political territory of a nation. In economics, it refers to economic territory which refers to the geographical territory administered by a government within which persons, goods and capital circulate freely. Domestic territory of a nation includes the following:

- Territory lying within the political frontier including territorial waters of a country.
- Ships and airplanes operated by residents of the country across different parts of the world.
- Fishing boats of country's fishermen and ships engaged in the exploration of oil and natural gas in the international waters.
- Embassies, consulates and military establishments of a country located in abroad.

3) Normal residents of a country

A normal resident is said to be a person (or institution) who ordinarily resides in a country and whose centre of economic interest lies in that country. He is called a normal resident since he normally lives in the country of his economic interest. The period of stay should be at least one year or more. Thus, (i) staying for more than a year and (ii) having economic interest [e.g. earning, spending, accumulation) are the two normal conditions for becoming a normal resident. It needs to be kept in mind that national income is the sum total of income of only normal residents of a country during a year.

Following points need to be noted:

(i) Normal residents cover both individuals and institutions.

(ii) Normal residents Include both citizens and non-citizens, i.e., foreigners who reside in a country for more than a year and have economic interest in that country.

(iii) International bodies like World Bank, World Health Organisation or International Monetary Fund are not considered residents of the country in which these organisations operate but are treated as residents of international territory. However, the staffs of these bodies are treated as normal residents of the country in which the international body operates. For example, international body like World Health Organisation located in India is not normal resident of India but Americans working in its office for more than a year will be treated as normal residents of India.

(iv) Local employees working in foreign embassies located in their country are treated as normal residents. For example, Indians working in US embassy located in India are residents of India.

(v) Workers from across the border who cross border in the morning to work in the other country (like Indians who work in Nepal) and return in the evening are not residents of the country where they work.

Normal residents of India include (i) Citizens (and institutions) of India, (ii) Citizens of other countries (i.e., non-citizens) who normally reside in India for more than a year and whose centre of economic interest lies in India, (iii) Citizens of India working in (a) international bodies like I.M.F., (b) foreign bodies like banks, enterprises operating in India and (c) foreign embassies located in India.

4) Depreciation/Consumption of fixed capital

Depreciation is the loss in value of an asset or a class of assets, as they age. Economically, depreciation is best described as a deduction from income to account for the loss in capital value owing to the use of capital goods in production. Consumption of fixed capital or Depreciation is therefore the fall in value of fixed capital goods due to:

- **Normal Wear and Tear:** During the process of production, capital goods such as machines, buildings and equipments suffer wear and tear.

- **Foreseen Obsolescence:** Obsolescence means loss of value of fixed capital assets due to change in technique of production or due to change in demand for goods and services produced.

- **Normal Rate of Accidental Damages:** Loss of value of the capital goods due to damage is called normal rate of accidental damages.

5) Gross vs. Net concepts

Net Product = Gross Product – Depreciation or Consumption of fixed capital

OR

Gross Product or Income = Net Product or Income + Depreciation or Consumption of fixed capital

6) Net Indirect Taxes

Net Indirect Taxes = Indirect Tax - Subsidies

- **Indirect Taxes:** Indirect Taxes are those taxes which are imposed by the government on the production, sale or import of goods. Indirect taxes tend to increase the market price of the goods and services. E.g. Excise duty, sales tax and customs duty.

- Estimation of national income in terms of the flow of goods and services valued at market prices includes the element of indirect taxes. On the other hand, if national income is estimated in terms of the flow of factor incomes, indirect taxes just do not come into the picture. Such an estimate of national income is called '**National Income at Factor Cost**.'

- **Subsidies**: Subsidies are monetary help by the government to the production with a view to encourage the production of certain commodities. Subsidies tend to reduce the market prices of the goods. Subsidies are deducted from the indirect taxes to find out net indirect taxes.

Factor cost = Market Prices - Indirect Taxes + Subsidies

OR

Market Price = Factor cost + Indirect Taxes - Subsidies

OR

Market Price = Factor cost + Net Indirect Taxes

7) Market Price vs. Factor Cost

- **Market Price** is the total price paid in the market to buy goods and services. It includes the price of the goods and net indirect taxes.

- **Factor Cost** is the payment made to the factors used in the production of goods and services or factor income or cost of production. It does not include the indirect taxes paid to the government.

Market Price = Factor cost + Net Indirect Taxes

8) Net Factor Income from Abroad

Net Factor Income from Abroad = Factor Income from Abroad by the Normal Residents – Factor Income of Non Residents in the domestic territory

Components of Net Factor Income from Abroad:

- **Net compensation of employees** refers to difference between payments received by the resident workers, temporarily employed abroad from the employers both in cash and kind and a similar payment made to non-resident workers who are employed temporarily within the domestic territory of a country.

- **Net Income from property and entrepreneurship:** difference between the income in the form of rent, interest and profit received by the residents of a country and similar payments made to rest of the world.

- **Net Retained earnings of Resident companies abroad:** difference between the retained earnings of resident companies abroad and retained earnings of foreign companies located within the domestic territory of a country.

9) National vs. Domestic

National Product = Domestic Product + Net Factor Income from Abroad

OR

Domestic Product = National Product - Net Factor Income from Abroad

10) Social Security Contributions

It includes contributions made by employer for the social security of employees. For example, contribution to provident fund, gratuity, labor welfare funds, retirement pension, etc. The aim of such contributions is to ensure safety and security of life of the employees. Social Security Contributions are a part of National Income but not of Private Income.

11) Interest on National Debt

Government raises loan from the people to meet war and other unproductive expenses. Interest paid on these loans is not treated as national income; rather it is treated as transfer payments from the government to household sectors. No, it is not included in the national income as it is the interest paid on loans taken by government to meet its consumption purposes.

12) Factor Income and Transfer Income

Factor Income is the payment received by factors of production (land, labor, capital, etc.) for their services. Factor payments are wages, rent, interest and profit.

Transfer Income is that earning for which no contribution is made to the flow of goods and services. These are unilateral payments. Old age pensions and scholarships are examples of transfer incomes.

In national income, only factor income is included. The transfer income is not included.

Some Other Concepts Related to National Income

1) Gross Domestic Product at Market Price (GDP_{MP})

Gross domestic product (GDP) is the market value of the output of final goods and services produced in the domestic territory of a country during an accounting year.

- **Gross:** Includes depreciation i.e. consumption of fixed capital
- **Domestic:** production within the domestic territory of India. Example: production of cars by the foreign companies in India will be treated as a part of GDP of India.
- **Value of final goods and services:** Only the market value of final goods and services is taken into account, not the intermediate goods and services.
- **Things not included in GDP:** Income from illegal activities like gambling, Black money, Transfer payments, Income from shares and debentures, value of second hand goods and self consumption services like a doctor treating his wife.

2) Net Domestic Product at Market Price (NDP_{MP})

$GDP_{MP} = NDP_{MP} + Depreciation$

OR

$NDP_{MP} = GDP_{MP} - Depreciation$

Net domestic product at market price (NDP_{MP}) is the market value of the output of final goods and services produced in the domestic territory of a country during an accounting year, exclusive of depreciation.

3) Gross National Product at Market Price (GNP_{MP})

Gross national product at market price (GNP_{MP}) is the market value of the output of final goods and services produced in the domestic territory of a country during an accounting year, inclusive of net factor income from abroad and consumption of fixed capital (depreciation).

Net Factor Income from Abroad *= Factor Income from Abroad by the Normal Residents – Factor Income of Non Residents in the domestic territory*

GDP_{MP} + *Net Factor Income from Abroad* = GNP_{MP}

4) Net National Product at Market Price (NNP_{MP})

Net National Product at Market Price is market value of final goods and services produced by normal residents in the domestic territory and abroad during an accounting year, exclusive of depreciation.

Net National Product at Market Price = Market value of final goods and services produced during a year + Net Factor Income from Abroad – depreciation or consumption of fixed capital

5) Gross Domestic Product at Factor Cost (GDP_{FC})

Gross domestic product at factor cost is the sum total of factor incomes (rent + interest + profit + wages) generated within the domestic territory of a country, along with consumption of fixed capital, during a year.

$GDP_{FC} = NDP_{FC} + Depreciation$

6) Net Domestic Product at Factor Cost (NDP_{FC})

Net Domestic Product at Factor Cost (NDP_{FC}) is the sum total of factor incomes (rent + interest + profit + wages) generated within the domestic territory of a country during a year. It is also called '**Net domestic income**'.

$NDP_{FC} = NDP_{MP} – Indirect\ Taxes + Subsidies$

OR

$NDP_{FC} = NDP_{MP} – Net\ Indirect\ Taxes\ (NIT = Indirect\ Taxes - Subsidies)$

7) Gross National Product at Factor Cost (GNP_{FC})

Gross National Product at Factor Cost (GNP_{FC}) is the sum total of factor incomes earned by normal residents of a country, along with consumption of fixed capital, during a year.

$GNP_{FC} = NNP_{FC} + Depreciation$

8) Net National Product at Factor Cost (NNP_{FC})

Net National Product at Factor Cost (NNP_{FC}) is the sum total of factor incomes (rent + interest + profit + wages) generated within the domestic territory of a country, along with net factor income from abroad during a year.

NNP_{FC} is the sum total of factor incomes earned by normal residents of a country during a year. It is known as '**National Income**'.

$NNP_{FC} = NDP_{FC} + Net\ factor\ income\ from\ abroad$

9) National Disposable Income

National Disposable Income is the income from all sources (earned as well as transfer payments from abroad) available to residents of a country for consumption expenditure or for savings during a year.

National Disposable Income = National Income + Net Indirect Taxes + Net Current Transfers from the Rest of the World

10) Factor Income from Net Domestic Product Accruing to Private Sector

Income from net domestic product accruing to private sector is that part of NDP_{FC} which is accrued to the private sector.

***Factor Income from Net Domestic Product Accruing to Private Sector** = Net Domestic Product at Factor Cost – Income from Property and Entrepreneurial accruing to Government department enterprises – Savings of Non-departmental enterprises*

11) Private Income

Private Income is the total of factor incomes from all sources and current transfers from the government and rest of the world accruing to private sector.

Private Income = Factor Income from Net Domestic Product Accruing to Private Sector + Net factor income from abroad + Interest on National Debt + Current transfers from Government + Current transfers from Rest of the World

12) Personal Income

It is the total money income actually received by individuals and households of a country from all possible sources in the form of factor income and current transfers.

Personal Income = Private Income – Undistributed Profits (Corporate Savings) – Corporation Tax

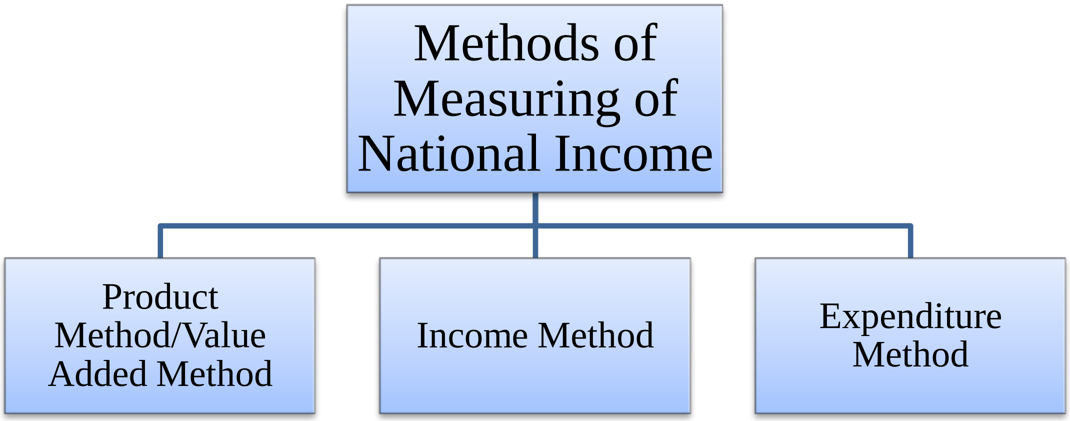
13) Personal Disposable Income

Personal Disposable Income is that part of income remaining with the individuals and households after deduction of all taxes levied against their income and their property by the government.

Personal Disposable Income = Personal Income – Direct Personal Tax – Miscellaneous Receipts of the government administrative department or miscellaneous fines and fees paid by the households

Measurement of National Income

There are three methods of measuring national income:



1. Product Method or Value Added Method

Value added method, also called net output method, is used to measure the contribution of an economy's production units to the GDP_{MP}. In other words, value-added method measures value added by each industry in an economy.

Value Addition or Value Added = Value of Output – Intermediate Consumption

Value of Output = Sales, if entire output is sold during the year

Value of Output = Sales + Δ Stock (Change in stock)

Δ Stock = Closing Stock – Opening Stock

GDP_{MP} *= Gross value added by all producing units within the domestic territory of a country during the period of one year*

GDP_{MP} *– Depreciation =* NDP_{MP} *– Net Indirect Taxes =* NDP_{FC} *+ net factor income from abroad =* NNP_{FC} *(**National Income**)*

Precautions:

- Imputed rent values of self-occupied houses should be included in the value of output. Though these payments are not made to others, their values can be easily estimated from prevailing values in the market.

- Sale and purchase of second-hand goods should not be included in measuring value of output of a year because their values were counted in the year of output of the year of their production. Of course, commission or brokerage earned in their sale and purchase has to be included because this is a new service rendered in the current year.

- Value of production for self-consumption is being counted while measuring national income. In this method, the production for self-consumption should be valued at the prevailing market prices.

- Services for self-consumption like services of housewives are not included because it is not easy to find out correctly the value of these services.

- Value of intermediate goods must not be counted while measuring value added because this will amount to double counting. (Problem of double counting arises when the value of certain goods is counted more than once).

- The value added in the government sector is equal to compensation of employees only. It is because data regarding rent and interest are not available for this sector and profit just does not exist because all that is produced to mean for collective consumption, not for sale in the market.

2. Income Method

Income Method measures national income from the perspective of factor incomes. Under this method, incomes received by all the residents of a country for their productive services during a year are added up to obtain the national income.

According to this method, all the incomes that accrue to the factors of production by way of wages, profits, rent, interest, etc. are summed up to obtain the national income. Income method is also known as 'Distributive Share Method' or 'Factor Payment Method'.

Classification of Factor incomes

1) **Compensation of Employees:** The compensation of employees includes wages and salaries in cash, payments in kind, employer's contribution to social security schemes and pension on retirement.

2) **Operating Surplus:** It includes income from property and entrepreneurship. The operating surplus includes rent, interest, profit (dividend + corporation tax + savings of enterprises or undistributed profits).

3) **Mixed Income:** Mixed Income refers to the incomes of the self-employed persons using their labour, land, capital and entrepreneurship to produce goods and services. These incomes are mixed in terms of wages, rent, interest and profit. Such incomes are also a part of national income.

NDP_{FC} = Sum total of factor incomes generated within the domestic territory of a country during an accounting year. (Compensation of Employees + Operating Surplus + Mixed Income)

NNP_{FC} = NDP_{FC} + Net factor income from abroad

Precautions:

- Transfer Incomes (like scholarships, donations, charity, old age pensions, etc.) are not included in the National income because such receipts are not connected with any productive activity and there is no value addition.

- Income from illegal activities like smuggling, theft, gambling, etc. should not be included in national income. Income generated in terms of black money is also not included in national income.

- Income from sale of second-hand goods will not be included in national income as their original sale has already been counted. If they are included again, it would lead to double counting. However, any brokerage or commission received by brokers or commission agents on sale of such goods will be included as it is an income received for rendering productive service.

- Income from sale of shares, bonds and debentures will not be included as such transactions do not contribute to current flow of goods and services. These financial assets are mere paper claims and involve a change of title only. However, any commission or brokerage on such financial assets is included as it is a productive service.

- Windfall gains (like income from lotteries, horse race, etc.) are not included as there is no productive activity connected with them.

- Imputed value of services provided by owners of production units will be included: Imputed value of owner-occupied houses, interest on own capital, production for self-consumption, etc. will be included as these are productive activities and add to the flow of goods and services.

- Payments out of past savings (like death duties, gift tax, wealth tax, etc.) are not included in the National income because they are paid out of wealth or past savings and do not add to current flow of goods and services.

- Indirect Taxes (like sales tax, excise duty, custom duty, etc.) are not included in national income at factor cost. However, they are included in national income at market price.

- Corporate tax, dividends and undistributed profits are all the components of corporate profits. Once profit is included in the estimation of national income, any of these components should not be separately added.
- Income tax is paid out of compensation of employees. It should not be added in the estimation of national income.
- Death duties, gift tax, wealth tax and taxes on windfall profits are paid not out of current income but out of past savings of the tax payer. Hence not to be included in national income.
- Wages and salaries in cash and kind as well as social security contributions by the employers on behalf of employees are all components of compensation of employees. Any of these components should not be separately added once compensation of employees is included in the estimation of national income.

3. Expenditure Method

Final expenditure method, also known as final product method, is used to measure final expenditures incurred by production units for producing final goods and services within an economic territory during a given time period.

These expenditures are incurred on consumption and investment. This method is the opposite of the value-added method. This is because value-added method estimates national income from the sales side, whereas the expenditure method calculates national income from the purchase side.

Classification of Final Expenditure

1) **Private Final Consumption Expenditure (C)** refers to expenditure on final goods and services by the individuals, households and non-profit private institutions serving society like Help-Age. It includes:
    - Consumer services
    - Consumer non-durable goods
    - Consumer durable goods
2) **Government Final Consumption Expenditure (G)** refers to expenditure on final goods and services by the government like expenditure on the purchase of goods for consumption by the defence personnel.
3) **Investment Expenditure** refers to expenditure on the purchase of final goods by the producers. For example: expenditure by farmers on the purchase of tractors.

Investment Expenditure is classified as:

- **Fixed Investment** refers to expenditure on the purchase of fixed assets by the producers like plant and machinery. Fixed Investment is further classified as (i) business fixed investment (ii) fixed investment by the households in terms of construction of houses and (iii) fixed investment by the government on construction of roads, dams and bridges.

- **Inventory Investment** refers to change in stock during the year.

4) **Net Exports (X – M)** refers to difference between exports and imports during an accounting year.

Private final Consumption Expenditure
+ Government final Consumption Expenditure
+ Business fixed Investment
+ Government fixed Investment
+ Investment on residential construction
(**Gross Domestic Fixed Investment**)
+ Inventory Investment (= Δ Stock = Closing Stock – Opening Stock)
+ Net Exports (X – M)
= GDP_{MP}

*GDP_{MP} – Depreciation = NDP_{MP} – Net Indirect Taxes = NDP_{FC} + Net factor income from abroad = NNP_{FC} (**National Income**)*

Precautions:

- Final Expenditure is to be taken into account to avoid error of double counting.

- Intermediate expenditure in not included in the calculation of national income. Because it is already reflected in the value of final expenditure.

- Expenditure on second hand goods is not included. Because their value has already been taken into account during the year of their production.

- Expenditure on shares and bonds is not included in total expenditure as there are mere paper claims and are not related to the flow of final goods and services. Such expenditures do not make any value addition.

- Expenditure on transfer payments by the government is not included in total expenditure like old age pensions, scholarships, etc. Because these payments do not make any value addition.