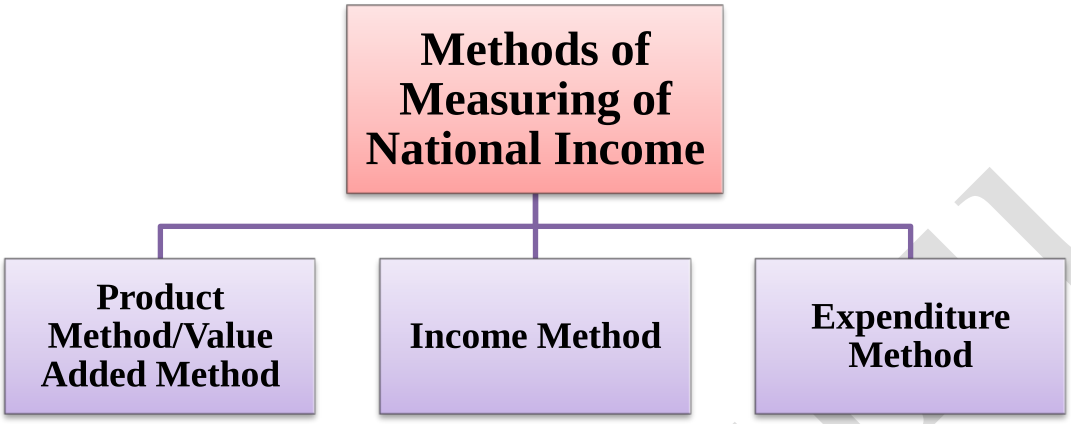
Measurement of National Income

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.