

# **National Income Concept and Measurement**

# Meaning of National Income

- National income is the money value of all the final goods and services produced by a country during a period of one year. National income consists of a collection of different types of goods and services.

# **NI is the Money measure of,**

1. The net value of all products & services
2. Of an economy during a year
3. Counted without duplication
4. After having allowed for depreciation
5. Both in the public & private sectors
6. In consumption & capital goods sectors
7. Finally throwing in the net gains from international transactions comprising of gains, not merely from export, import, trade but also from capital lent or invested abroad

# Example

- If the value of a meter of cloth is Rs. 20 and the total cloth produced is 100 meters, then the money value of cloth is Rs. 2000. In this way we can find out the value of other goods and services and the total value of all the goods and services produced during one year.

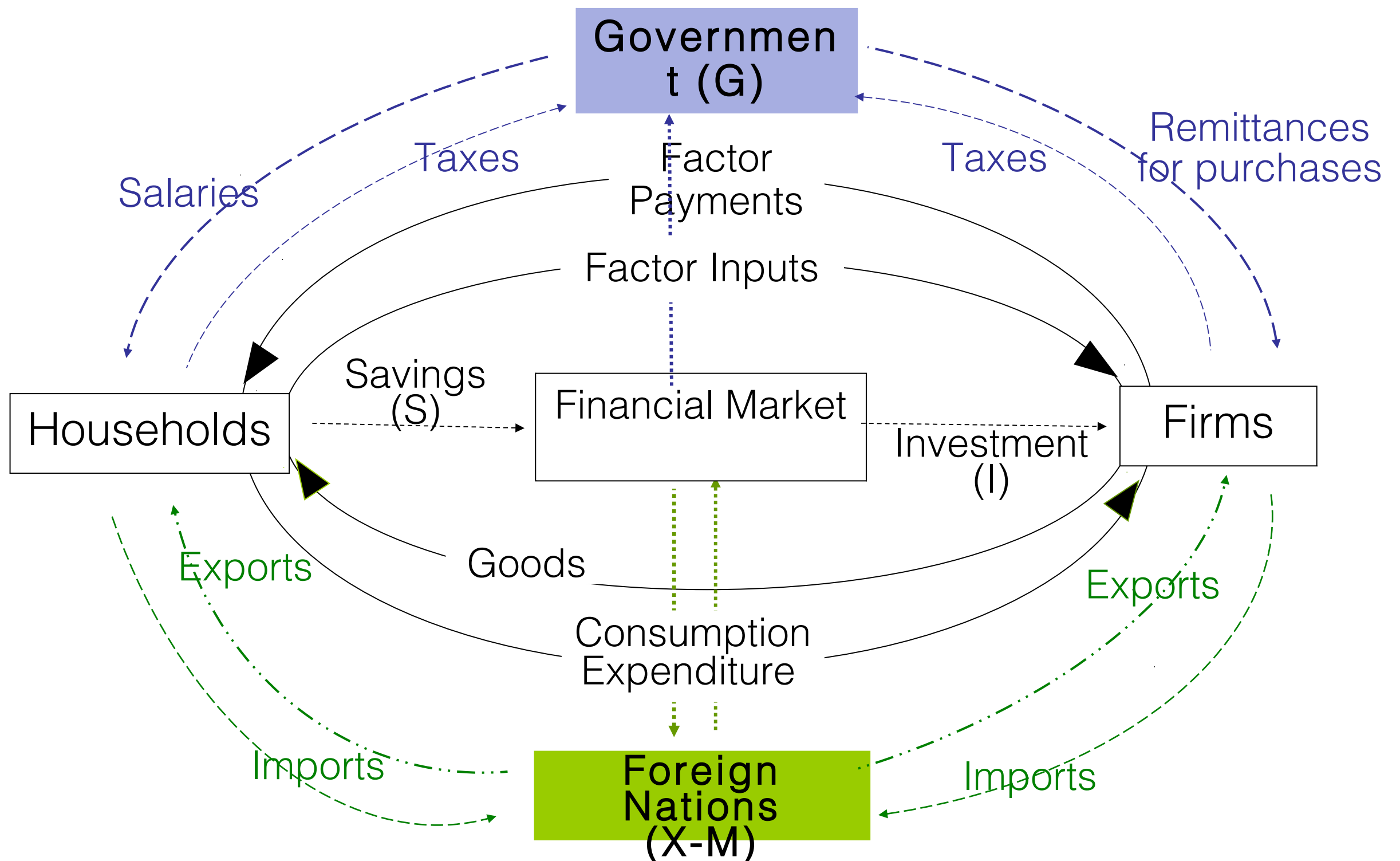
# Basic Concepts in National income

- Gross Domestic Product (GDP)
- Net Domestic Product (NDP)
- Gross National Product (GNP)
- Net National Product (NNP)

# Basic Concepts in National income

- Personal Income (PI)
- Disposable Personal Income (DPI)
- Real income

# Circular Flow of Income (Four Sector Economy)



# Gross Domestic Product

- Gross domestic product is the money value of all final goods and services produced in the domestic territory of a country during an accounting year.



# Gross Domestic Product

- Domestic territory Means
  - a. Territory lying within the political frontiers, including territorial waters of the country.
  - b. Ships and aircrafts operated by the residents of the country between two or more countries.

# Gross Domestic Product at Current price

- GDP can be estimated at current prices and at constant prices. If the domestic product is estimated on the basis of the prevailing prices it is called gross domestic product at current prices.

# Gross Domestic Product at Constant price

- If GDP is measured on the basis of some fixed price, that is price prevailing at a point of time or in some base year it is known as GDP at constant price or real gross domestic product.

# Net Domestic Product

- While calculating GDP no provision is made for depreciation allowance (also called capital consumption allowance). In such a situation gross domestic product will not reveal complete flow of goods and services through various sectors.

# Net Domestic Product

- A part of is therefore, set aside in the form of depreciation allowance. When depreciation allowance is subtracted from gross domestic product we get net domestic product.

$$\text{NDP} = \text{GDP} - \text{Depreciation}$$

# Gross National Product

- Gross national product is defined as the sum of the gross domestic product and net factor incomes from abroad. Thus in order to estimate the gross national product of India we have to add net factor income from abroad - income earned by non-resident in India to form the gross domestic product of India.

$$\text{GNP} = \text{GDP} + \text{NFIA}.$$

# Net National Product

- It can be derived by subtracting depreciation allowance from GNP. It can also be found out by adding the net factor income from abroad to the net domestic product.

$$\text{NNP} = \text{GNP} - \text{Depreciation}$$

OR

$$\text{NNP} = \text{NDP} + \text{NFIA}$$

# NNP at factor cost or National Income

- NNP at factor cost is the volume of commodities and services turned out during an accounting year, counted without duplication. It can also be defined as the net value added at factor cost in an economy during an accounting year.



# NNP at factor cost or National Income

- NNP at factor cost or national income is defined as the sum of domestic factor incomes and net factor income from abroad. If NNP figure is available at market price we will subtract indirect taxes and add subsidies to the figure to get NNP at factor cost or national income of the economy.

# NNP at factor cost or National Income

- $\text{NNP at}_{FC} = \text{National Income} = \text{FID} + \text{NFIA}$
- FID factor income earned in the domestic territory of a country.
- Net Factor Income from Abroad.

# Personal Income and Disposable income

- Personal income and disposable income are two concepts of national income very commonly used in advanced countries. Personal income may be defined as the current income of persons or households from all services. Personal income is not a measure of production.

# Disposable Income

- All personal income is not at the disposal to be spent on consumption. Individuals have to pay personal direct taxes to the government. They are free to spend only after the payment of taxes.
- $DPI = \text{Personal income} - \text{Personal Direct taxes}$ .

# Disposable Personal Outlay

- The disposable personal income may be spent fully or individuals may save. What remains after saving is called the personal outlay. Disposable income is equal to consumption and savings.
- Disposable outlay = Disposable income – Savings.

# Real Income

- Since national income does not reveal the real state of the economy, the concepts of real income has been used. To find out the real income of the economy, a base year is selected and the price level of that year is assumed to be 100.
- **Real income =  $\frac{\text{Money Income}}{\text{Price Index}} \times 100$**

# Methods of Measuring national income

- **Three alternative ways,**
- Census method or production method
- Income method
- Expenditure method
- Added to this, there is yet another method of estimating national income i.e., Value added method.

# Product Method

- It is also known as inventory or Product method. In this method, the economy is classified into convenient sectors like Agricultural, Industrial, Direct services and foreign transaction sector where international payments are considered.



# Product Method

- According to this method, Value of output is estimated
- Value of intermediate goods (input) is deducted from the value of output to obtain Gross Value Added

**Gross Value Added = Value of Output – Value of intermediate goods**

**Net Value Added = Gross Value Added – Depreciation**

# Limitations of Product Method

- **Problem of Double Counting:**
  - unclear distinction between a final and an intermediate product.
- **Not Applicable to Tertiary Sector:**
  - This method is useful only when output can be measured in physical terms
- **Exclusion of Non Marketed Products**
  - E.g. outcome of hobby or self consumption
- **Self Consumption of Output**
  - Producer may consume a part of his production.

# Income Method

- The net income received by all citizens of a country in a particular year, i.e. total of net rents, net wages, net interest and net profits.
- It is the income earned by the factors of production of a country.

## Process

- Economy is divided on basis of income groups, such as wage/salary earners, rent earners, profit earners etc.
- Income of all the groups is added, including income from abroad and undistributed profits.
- The income earned by foreigners and transfer payments made in the year are subtracted.

# Income Method

- **GNP = wages and salaries + rent + interest + Dividends + undistributed corporate profits + mixed incomes + direct taxes + indirect taxes + depreciation + net income from abroad.**

# Limitations of Income Method

- **Exclusion of non monetary income:** Ignores the non-monetized section of economic activities.
  - Economic activities that contribute to national income, but due to their non monetary nature, they go unrecorded. For e.g. a farmer and family working in their own field.
- **Exclusion of Non Marketed Services:** People undertake a particular activity that are difficult to ascertain in money value. E.g. mother's services to the family.

# Expenditure method

- The total expenditure incurred by the society in a particular year is added together to get that year's national income.
- Components of Expenditure:
  - ✓ personal consumption expenditure
  - ✓ net domestic investment
  - ✓ government expenditure on goods and services, and
  - ✓ net foreign investment

# Limitations

- Ignores Barter System
- Ignores Own Consumption
- Affected by Inflation

# Value Added Method

- In order to avoid double counting value added at each stage of production should be calculated to arrive at GNP. The difference between the value of output and input at each stage of production is called the value added. By summing such value added for all industries in the economy, GNP can be found out.



# Difficulties in Measurement of National Income

- **Non monetized transactions:** Exchange of goods and services which have no monetary payments, like services rendered out of love, courtesy or kindness are difficult to include in the computation of national income.
- **Unorganized sector:** Contribution of unorganized sector are unrecorded. It is very difficult to identify income of those who do not pay income tax.
- **Multiple sources of earnings:** Part time activity goes unrecognized and such income is not included in national income.
- **Categorization of goods and services:** In many cases categorization of goods and services as intermediate and final product is not very clear.
- **Inadequate data:** Lack of adequate and reliable data is a major hurdle to the measurement of national income of underdeveloped countries.

# Importance of National Income Analysis

- They provide as an index of economic activity and an instrument of economic planning.
- National income accounting indicates the growth of the economy in terms of income and output.
- National income statistics help the policy makers to frame policies to achieve full employment and rapid economic growth.

# Importance of National Income Analysis

- A complete knowledge about the trends in national income is essential in economic planning.
- Research scholar also make use of national income data pertaining to input, output, saving, consumption, investment and employment.
- National income statistics it helps in solving the remove inequalities in income distribution.

# Mathematical summaries of various concept

- **GNP at market price – depreciation = NNP at market price**
- **GNP at market price – net income from abroad = GDP at market price**
- **GNP at market price – net indirect taxes = GNP at factor cost.**
- **NNP at market price – net income from abroad = NDP at market price**
- **NNP at market price – net indirect taxes = NNP at factor cost**

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