

CIRCULAR FLOW OF INCOME AND NATIONAL INCOME ACCOUNTING

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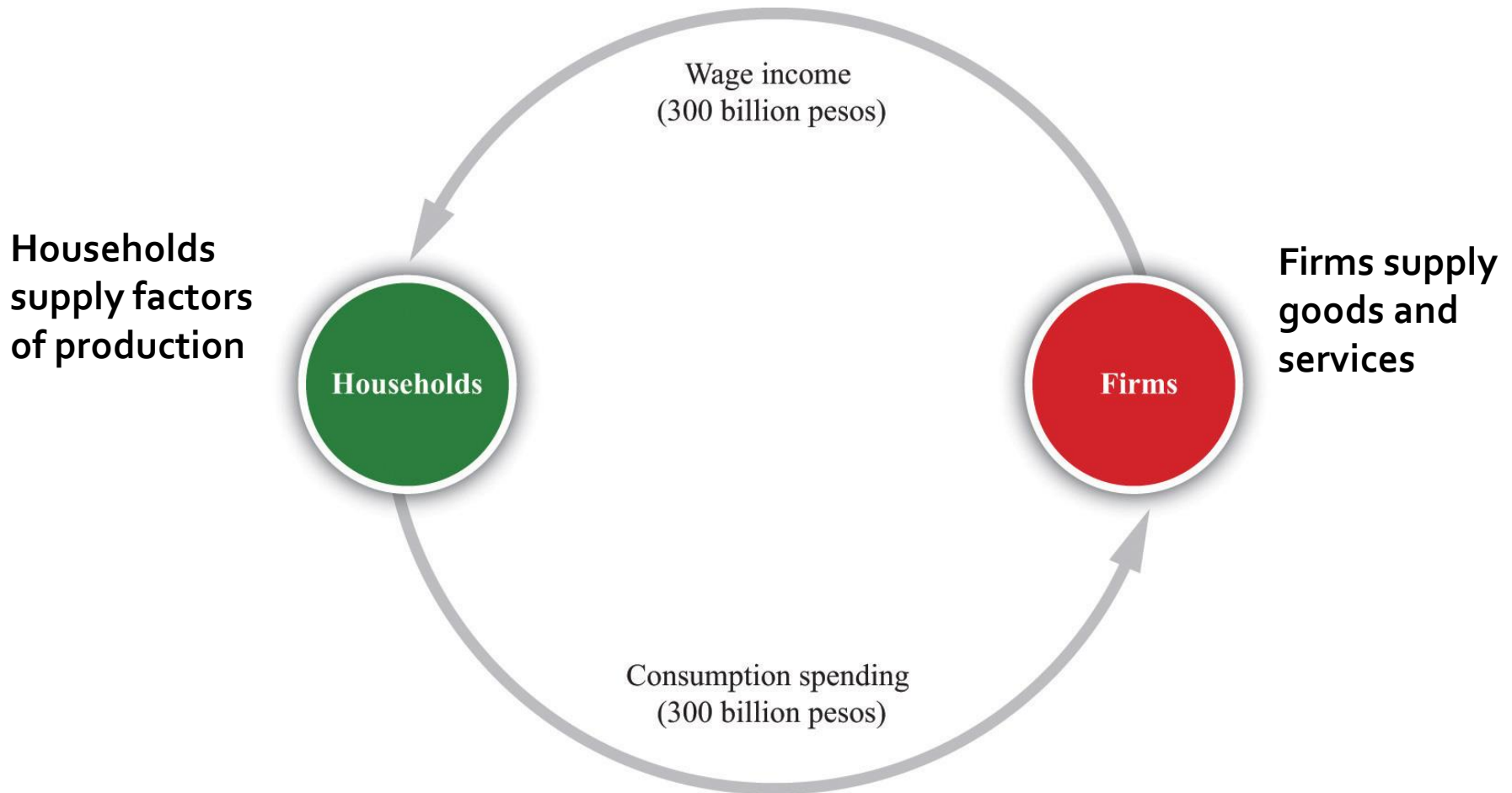
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CIRCULAR FLOW OF INCOME

The circular flow of Income depicts the flow of money among the major players in the economy.

In the monetary economy, there will be flows of money corresponding to the flows of economic resources and flows of goods and services.

In a simple two sector economy



WITH SAVINGS AND INVESTMENT

Savings(S): Leakage from the flow of income.

Investment(I): Injection into the flow of income

$Y=C+I$ (expenditure)

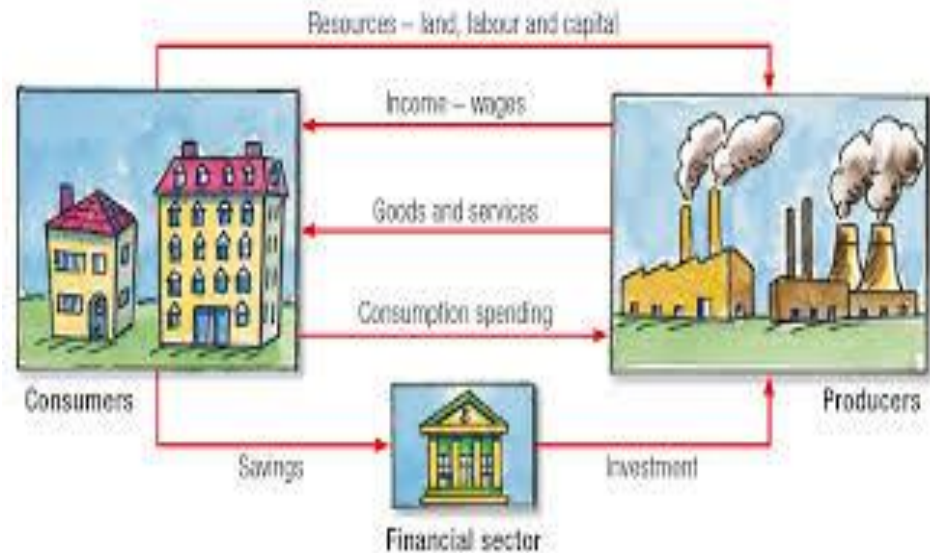
$Y=C+S$ (Income)

For the constancy of the circular flow of income and in national income accounts:

$$S=I$$

(For simple two sector model)

*C= Consumption Y=Output



THREE SECTOR MODEL

G= Government Expenditure

T= Taxes

Total Expenditure = C+I+G

Total Income (Y) = C+S+T

Income=Expenditure

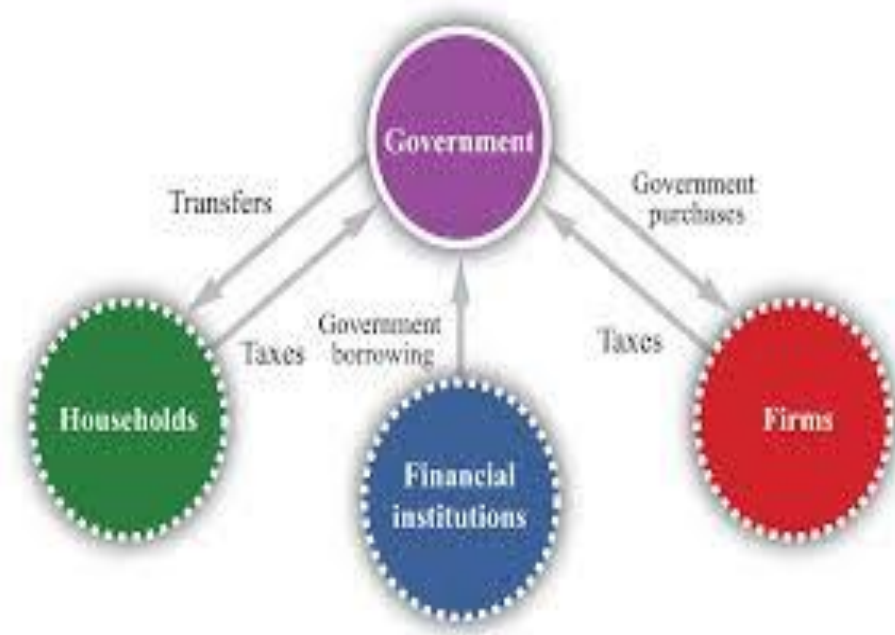
$Y=C+I+G$

$I+G=S+T$

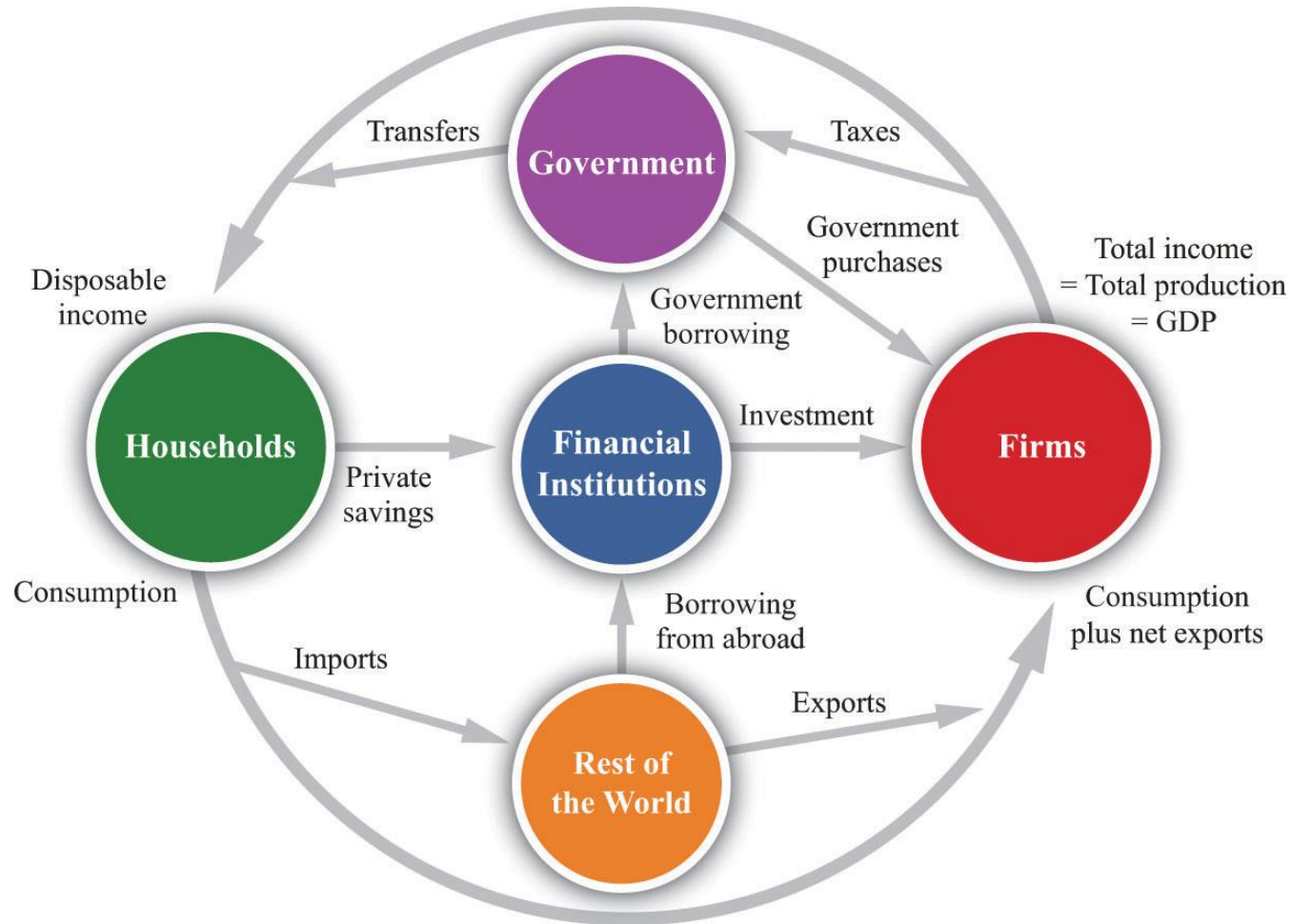
$G-T=S-I$

$Y-C-G=I$

(National Savings= Investment)



OPEN ECONOMY



Including the external sector, Net exports: $NX = \text{Exports} - \text{Imports}$

Total Expenditure = $C + I + G + NX$

Total Income (Y) = $C + S + T$

$$Y = C + I + G + NX$$

$$C + I + G + NX = C + S + T$$

$$I + G + NX = S + T$$

National Income Accounting

- National income (NI) is the money value of all the final goods and services produced by a country during a period of one year.
- It consists of a collection of different types of goods and services of different types.
- Since these goods are measured in different physical units it is not possible to add them together and thus the common measure is money.

Basic Concepts in National income

- Gross Domestic Product (GDP) : GDP is the money value of all final goods and services produced in the domestic territory of a country during an accounting year.
- GDP includes only the market value of FINAL GOODS (goods and services that are purchased for final use by consumer, not for resale, or further processing) and ignores INTERMEDIATE GOODS (goods and services that are purchased for resale or for further processing) altogether.
- GDP can be estimated at current prices and at constant prices.
- GDP (curr.p) : If the domestic product is estimated on the basis of the prevailing prices it is called gross domestic product at current prices.
- GDP(const.p) : 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.

- Market Price and Factor Cost: GDP can be measured at market price and factor cost.
- Market price – current price in the market through the forces of demand and supply. (actual price paid by consumers)
- Factor cost – real price earned by producer or seller.

- GDP at Factor cost and GDP at Market price
- $GDP (fc) = GDP - (IT-S)$
- 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.

- 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.
- $NDP = GDP - \text{Depreciation}$.
- Gross National Product (GNP): It is defined as the sum of the gross domestic product and net factor incomes from abroad.
- $GNP = GDP + NFIA$.

- 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.
- $NNP = GNP - \text{Depreciation}$
- In terms of Factor costs
 - $GNP (fc) = GNP - \text{Net indirect taxes (IT-S)}$
 - $NNP (fc) = GNP(fc) - \text{Depreciation} = \text{National Income}$

Methods of Measuring National Income

- The national income of a country can be measured in three alternative ways.
 1. Value Added method
 2. Expenditure Method
 3. Income Method

Value Added Method

- In this method, the economy is classified into three transaction sector like industrial, services and foreign transaction sector where international payments are considered.
- We calculate the money value of all final goods and services produced in an economy during a year. The money value of these goods and services is calculated at market price. The sum-total is called the GDP at market price .

Income Method

- We estimate the income earned by various factor services engaged in the process of production. The sum of these incomes provides us the measure of gross national income at factor cost.
- $GNP = \text{wages and salaries} + \text{rent} + \text{interest} + \text{Dividends} + \text{undistributed corporate profits} + \text{mixed incomes} + \text{direct taxes} + \text{indirect taxes} + \text{depreciation} + \text{net income from abroad}$

Expenditure Method

- Prof. Samuelson calls this as “ Flow of Product Approach”. In India, it is known as Outlay method. GNP is the sum of expenditure incurred on goods and services during one year in a country.
- $GNP = C + I + G + (X - M)$
- We sum up the flow of expenditure in an economy to arrive at national income estimates, If we add the value of expenditure on all these items we get the value of gross national expenditure at market prices

Challenges in calculation

The calculation of the national income of a country is not an easy task . National income calculations are complicated and complex . These problems arise due to a lack of a clear grasp of the national income accounting procedures .

These are two major problems which will arise when calculating national income . These problems are practical and conceptual in nature .

- **Problems of non-monetized sector :** Problems of a non-monetized sector usually arise in most third world countries like India , Bangladesh, Myanmar , Cambodia , Vietnam and Many African countries .

The existence of a large number of non-monetized activities in these countries especially in the agriculture sector makes the computation of the national income more difficult . This is due to the fact that a large quantity of agricultural output in these countries does not reach the market . It is either consumed directly by farmers or exchanged for other goods and services . This leads to difficulties in calculating the national income .

- **Problem of illiteracy** : A large number of small producers in third world countries are illiterate and are unable to keep accounts of their productive activities .Most of the products that they produce are for self - consumption and not for the market and records are not kept productivity activity . Thus they fail to provide accurate information to the government for the purpose of calculating national income .
- **Problem of expertise** :The lack of professionals such as statisticians ,researchers , programmers and analysis is a major problems in third world countries . The services of these professionals is very important in estimating national income data accurately with minimum errors .

- **Problem of less sophisticated machinery:** Another important difficulty is the non-availability of sophisticated machinery such as advanced computers or programs to compute national income data . Data collected on national income regardless of which method is used , need to be analyzed using sophisticated machinery .
- **Problem of double counting :** Another difficulty is double counting which is usually associated with the product methods .Double counting implies the possibility of intermediate goods being included in the national income more than once.
- **Problem of false information :**This problem arises in developed as well as developing countries . people do not disclose their income or underestimate their income to avoid paying higher taxes .
- **Problem of multi – occupations:** Another difficulty in calculating national income is the problem of multi - occupations . People have been found to be engaged in a number of economic activities which are not included in the national income .

Thank you for your patience!!
