

# ECONOMICS

## (Macro-Economics)

### Chapter 2: National Income Accounting



## NATIONAL INCOME ACCOUNTING

### Introduction:

This is a numerical based chapter to calculate national income by different methods (Income, expenditure and value-added method, their steps and precautions). Numerically to determine private income, personal income, personal disposable income, National disposable income (net and gross) and their differences.

### Basic Concepts of Macroeconomics

Macroeconomics deals with the overall economy of the market and other systems on a large scale.

Macroeconomics studies about the performance, structure, and behavior of the entire economy. It focuses on the way the economy performs as a whole.

It analyzes how different sectors of the economy relate to one another. This includes unemployment, GDP, inflation, aggregate consumption, aggregate investment, saving, energy, international trade, international finance, etc. Its main instruments are demand and supply.

Macroeconomists study topics such as GDP, unemployment rates, national income, price indices, output, consumption, unemployment, inflation, saving, investment, energy, international trade, and international finance.

There are three main topics for macroeconomic theories which are related to the phenomena of output, unemployment, and inflation.

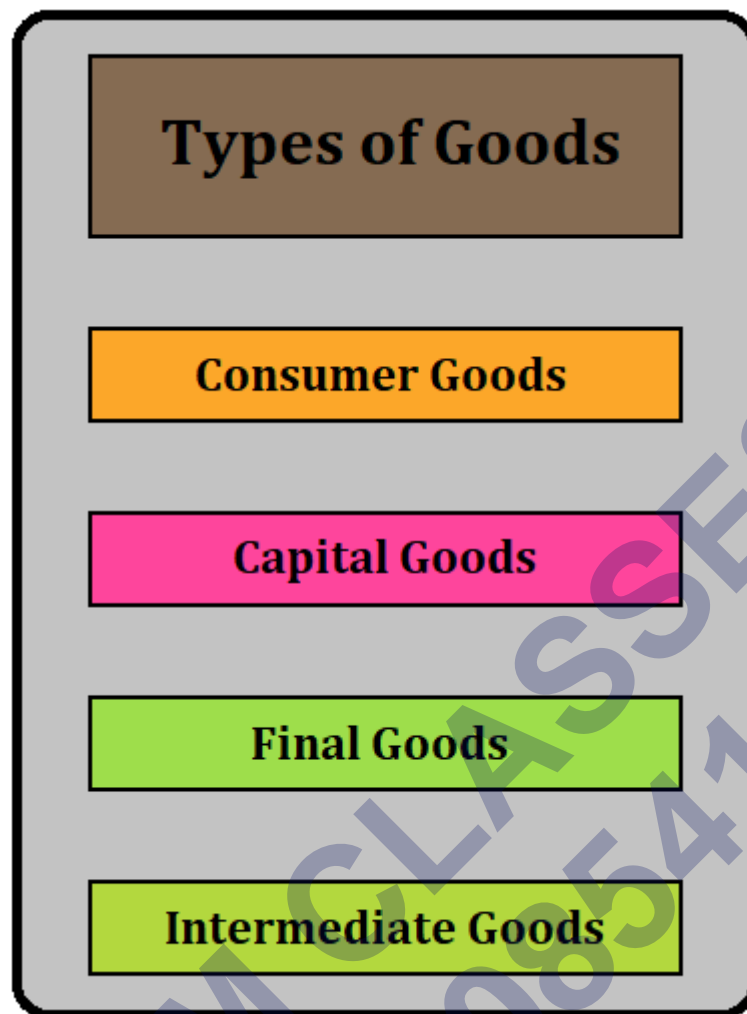
**Output:** It is the total amount of everything a country produces and sold in a given which generates an equal amount of income. The total output of the economy is measured GDP per person.

**Unemployment:** It refers to people who are employable but are unable to find a job. It also includes people in the workforce who are working but do not have an appropriate job.

Unemployment is measured by the unemployment rate, which is dividing the number of unemployed and employed people in the workforce, unemployment is one of the indicators of a country's economic status.

**Inflation:** When a general price increase across the entire economy is called inflation and when prices decrease, that is deflation. These changes in prices are measured with price indexes. Inflation can occur when an economy grows too quickly. Similarly, a declining economy can lead to deflation.

### Types of Goods:



#### + Consumer Goods:

Consumer goods are products made for consumption by the average consumer. It is the end result of production and manufacturing. Consumer goods are purchased to fulfill personal consumption needs.

Examples of consumer goods are clothing, food, furniture, jewelry etc. Basic materials, such as copper, are not considered consumer goods because they must be transformed into usable products.

#### + Capital Goods:

Capital goods are the goods that can be used to increase production. These goods are fixed, durable or tangible assets that are purchased by a business in order to produce finished products or consumer goods.

Examples of capital goods are equipment, machinery, buildings, computers, vehicles, and more. The concept of capital goods is used in macroeconomic terms where it is used in determining the capital formation and the production capacity.

For purchasing capital goods, a considerable amount of investment is required. This purchase of a capital good is referred to as a capital expense in accountancy.

#### + Final Goods:

A final good is a product that are used by the final consumer which does not require

any additional processing. It is for the direct use of the final consumer.

Final goods are also purchased by the firms for investment purposes or for capital formation.

#### ❖ **Classification of Final Goods:**

- **Convenience goods:** Convenience goods are those goods that are regularly consumed, e.g., milk, bread, pulses, and more.
- **Specialty goods:** Speciality goods that provide luxury and are expensive. These goods are not a necessity. Examples of such goods are antique cars, jewellery, and more.
- **Shopping goods:** These goods are durable and, more expensive than the convenience goods. e.g. refrigerators, televisions, laptops, and more.
- **Unsought goods:** These types of goods are not purchased often by the consumers, e.g. fire extinguishers, snow jackets, etc.
- **Intermediate Goods:** Intermediate goods are partially finished goods that are used for the production of other goods or services, that become final goods. Intermediate goods are an integral part of the production process, they are also known as producer goods, because they are used in the production process. These goods are transformed into another product, which is either another intermediate good or a final good for end user.

#### ❖ **Intermediate goods are of three main categories:**

- They are produced and immediately used by the manufacturer to produce final goods
- They are produced and sold in its partially completed form to other companies to produce final goods
- They are sold to another company to produce another intermediate good.

## **Stocks and Flows**

Any quantity that is measured at a particular point in time is known as Stock, and the quantity that can be measured over a period of time is called Flow

Both stocks and flow are dependent on each other. The concept of stock and flow is very important in Economics, it helps to understand the development of economic variables.

In a small period of time, flows will be close to zero, whereas stocks could have some value. Stocks are accumulated over time by flows, whereas flows represent the rate of movement of items in and out of stocks.

Flows can be divided into two parts: inflows (that add to stocks), and outflows (that deplete the stocks). The difference between these two is called net inflows.

If the inflow is more, than net inflow is positive and the stock will be rising, but if the inflow is less, than net inflow is negative, and the stock will be falling.

Example of stocks and flow is a bucket. The level of water in the bucket is a stock, the water coming from the tap is an inflow, and the draining of the water through the drain is an outflow.

If we plug the drain and turn on the tap, the net inflow will be positive, and the stock of water in the bucket will be rising. If, instead, we close the tap and open the drain, the net inflow of water will be negative, and the stock of water in the bucket will fall.

Economic development can be well described with the knowledge of which variables represent stock and which variables represent flows. Most of the macroeconomic variables reported by statistical agencies are flow variables.

#### **+ Gross Investment and Depreciation:**

Gross investment refers to the total expenditure on new capital goods over a specific period of time without considering depreciation. The investment which considers depreciations is known as Net investment

Net investment is calculated by subtracting depreciation from gross investment.

Some gross investment is required each year just to replace technologically, obsolete or worn-out plant and machinery.

Investment is done to obtain a good target return over a specified period of term. The target returns may be of any forms like an increase in the value of assets or securities.

There are different types of investments like autonomous, financial, real, planned, unplanned, gross and net.

If gross investment is greater than depreciation over any period of time then the net investment is positive and the capital stock has increased.

This indicates that businesses will have a higher productive capacity and can meet rising demand in the future.

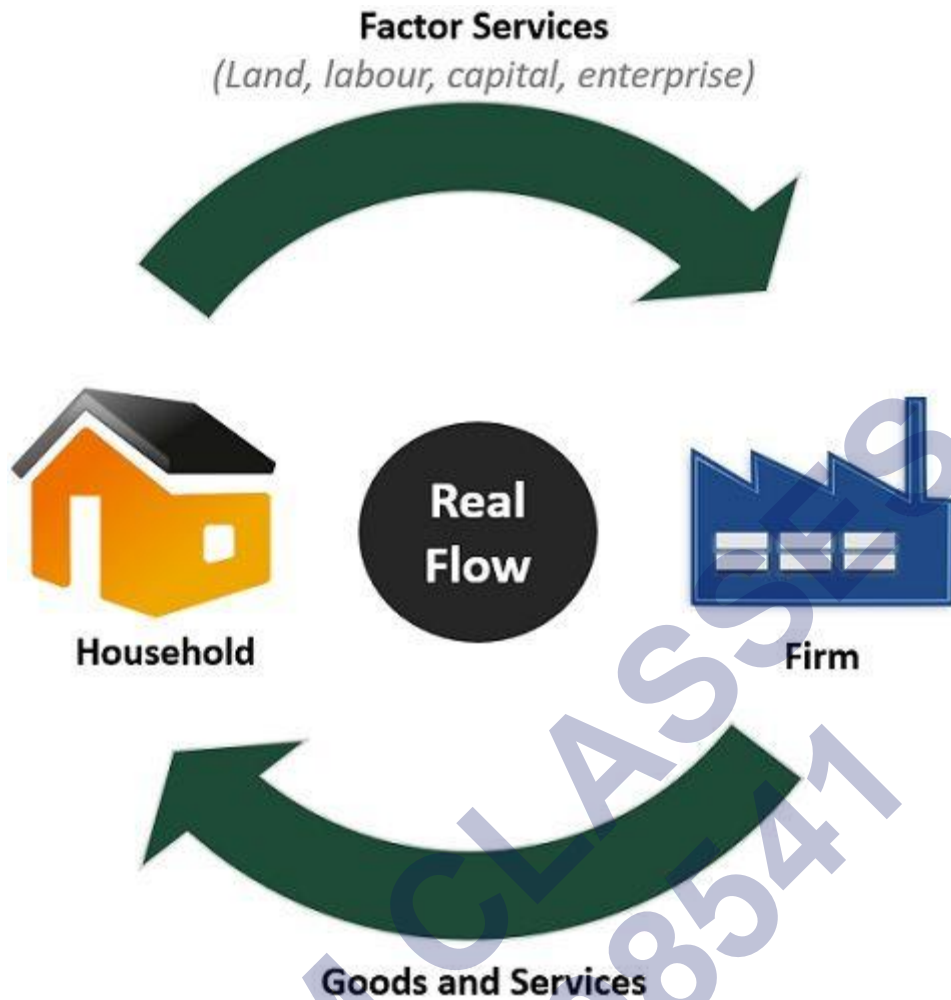
But, if gross investment is less than depreciation, then the net investment tends to be negative and the capital stock declines.

#### **+ Circular Flow of Income (two sector model):**

It refers to flow of money, income, goods and services across different sectors of the economy in a circular form.

This flow shows the redistribution of income in a circular manner between the production unit and households

These flows include land (rent), labour (wages), capita (interest), and entrepreneurship (profit).



❖ **There are two types of Circular flow:**

Real/ Product/ Physical Flow

Money/ Monetary/ Nominal Flow

- **Real flow:** This is the flow of factor services from the household sector to the producing sector and in return flow of goods and services from the producing sector to the household sector
- **Money Flow:** This flow of factor income, as rent, interest, profit and wages from the producing sector to the household sector as monetary rewards for their factor services

❖ **Circular Flow Of Income In Two Sector Model:**

- It is the flow of payments and receipts for goods, services, and factor services between the households and the firm sectors of the economy.
- Household supply factor services to firms and firms hire factor services from Households. Households spend their income on consumption and firms sell all its products to the households.

## Methods of calculating National Income

There are three known methods by which national income is determined. These are:

Value added method

Expenditure method

Income method

#### + Value Added Method:

The value added method is also known as the product method. Its main objective is to calculate national income by taking the value added to a product during the various stages of production into account.

The formula for calculating the national income by the value added method can be expressed as:

National income (NI) = (NDP<sub>fc</sub>) + Net factor income from abroad

#### + Expenditure Method:

The expenditure method of national income calculation is based on the expenditures taking place in the economy. This expenditure is done by individuals, households, business enterprises, and the government.

The formula for calculating the national income by the expenditure method can be expressed as:

National income (NI) = C + G + I + (X – M) Or, National income (NI) = C + G + I + NX

#### + Income Method:

This method is based on the income generated by the individuals by providing services to the other people in the country either individually or by using the assets at disposal.

The income generated from land, capital in the form of rent, interest, wages and profit is taken into consideration.

In this method the national income is calculated by adding up the wages, interest earned on capital, profits earned, rent obtained from land, and income generated by the self-employed people in an economy. It is known as net domestic product at factor cost or NDP<sub>fc</sub>.

#### ❖ The formula for income method is:

NNP<sub>fc</sub> = (NDP<sub>fc</sub>) + Net factor income from abroad

#### + Aggregate Of National Income:

In an economy, various types of goods and services are produced by different productive units during a period of one year. Such goods and services cannot be added together in terms of quantity. Therefore, these are expressed in terms of money.

There are many aggregates in national income to measure the value of goods and services in terms of money.

+ **Gross Domestic Product at Market Price (GDPMP)**: It is the gross market value of the final goods and services produced within the domestic territory of a country during an accounting year by all production units.

**GDPMP**

- G stands for 'Gross' signifies that depreciation is included, i.e., no provision has been made for depreciation.
- D stands for 'Domestic' which signifies that it includes all the final goods and services produced by all the production units located within the economic territory (irrespective of the fact whether produced by residents or non-residents).
- M stands for 'Market Price' ; it signifies that indirect taxes are included and subsidies are excluded, i.e., it shows that Net Indirect Taxes (NIT) have been included.
- P stands for 'Product' it signifies that only final goods and services have to be included and intermediate goods should not be included to avoid the double counting.

✚ **Gross Domestic Product at Factor Cost (GDPFC):** It is the gross factor value of the final goods and services produced within the domestic territory of a country during an accounting year by all production units excluding Net Indirect Tax.

$$\text{GDPFC} = \text{GDPMP} - \text{Net Indirect Taxes}$$

✚ **Net Domestic Product at Market Price (NDPMP):** It is defined as the net market value of all the final goods and services produced within the domestic territory of a country by its normal residents and non-residents during an accounting year.

$$\text{NDPMP} = \text{GDPMP} - \text{Depreciation}$$

✚ **Net Domestic Product at Factor Cost (NDPFC):** It refers to a total factor income earned by the factor of production within the domestic territory of a country during an accounting year.

$$\text{NDPFC} = \text{GDPMP} - \text{Depreciation} - \text{Net Indirect Taxes}$$

NDPFC is also known as Domestic Income or Domestic factor income.

✚ **Gross National Product at Market Price (GNPMP):** It refers to market value of all the final goods and services produced by the normal residents of a country during an accounting year.

$$\text{GNPMP} = \text{GDPMP} + \text{Net factor income from abroad (NIFA)}$$

GNPMP is less than GDPMP when NIFA is negative. However, GNPMP will be more than GDPMP when NIFA is positive.

✚ **Gross National Product at Factor Cost (GNPFC):** It refers to gross factor value of all the final goods and services produced by the normal residents of a country during an accounting year.

$$\text{GNPFC} = \text{GNPMP} - \text{Net Indirect Taxes}$$

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- ✚ **Net National Product at Factor Cost (NNPFC):** It refers to net money value of all the final goods and services produced by the normal residents of a country during an accounting year.

$NNPFC = GNPMP - \text{Depreciation} - \text{Net Indirect Taxes}$  It must be noted that NNPFC is also known as National Income.

- ✚ **Gross National Product (GNP):**

Gross National Product (GNP) is Gross Domestic Product (GDP) plus net factor income from abroad.

It measures the monetary value of all the finished goods and services, which are produced by the nation's economy during a specific period of time irrespective of their location.

Only the finished goods are considered as factoring intermediate goods used for manufacturing would amount to double counting. It only includes taxes not including subsidies.

The GNP is identical to gross domestic product (GDP) only difference is that the latter does not include the income accruing to a nation's residents from investments abroad.

Gross national product is an indicator of the level of a nation's economic activity.

- ✚ **Net National Product (NNP):**

Net national product (NNP) is the monetary value of finished goods and services, which are produced by a country's citizens, both overseas and domestically, in a given period of time minus depreciation.

NNP is generally examined on an annual basis as a way to measure a nation's success in continuing minimum production standards.

It is a very useful method to keep track of an economy as it takes into account all its citizens, regardless of where they make their money. It acknowledges the fact that capital must be spent to keep production standards high.

Gross Domestic Product (GDP) is the most popular method to measure national income and economic prosperity, although NNP is prominently used in environmental economics.

Gross Domestic Product (GDP) and Net Domestic Product (NDP) - at market price, at factor cost.

- ✚ **Real and Nominal GDP:**

Real gross domestic product (Real GDP) is an inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year

It is a macroeconomic measure of the value of the economy's output adjusted for price changes (inflation or deflation).

Real GDP compares GDP from year to year which shows comparisons for both the quantity and value of goods and services.

Real GDP is calculated by dividing nominal GDP over a GDP deflator

Nominal GDP is a macroeconomic measure of the value of the economy's output that is not adjusted for inflation.

Nominal gross domestic evaluated at current market prices. Nominal GDP includes changes in prices due to inflation, which reflects the rate of price increases in an economy.

GDP is measured as the monetary value of goods and services produced.

Since nominal GDP doesn't remove the pace of rising prices when comparing one period to other.

### **GDP Deflator:**

GDP deflator is a measure of the level of prices of all new, domestically produced, final goods and services in an economy in a year.

The GDP deflator measures the changes in prices for all of the goods and services produced in an economy. It helps to identify how much prices have inflated over a specific time period.

GDP deflator helps economists to compare the levels of real economic activity from one year to another.

It is a more comprehensive inflation measure than the CPI index because it isn't based on a fixed basket of goods.

Formula to calculate the GDP price deflator:

$$\text{GDP Price Deflator} = (\text{Nominal GDP} \div \text{Real GDP}) \times 100$$

## **Components of Final Expenditure:**

- 1. Final Consumption Expenditure**
  - a. Private Final Consumption Expenditure(C)
  - b. Government Final Consumption Expenditure(G)
- 2. Gross Domestic Capital Formation**
  - a. Gross Domestic Fixed Capital Formation
    - i. Gross business Fixed Investment
    - ii. Gross Residential Construction Investment
    - iii. Gross public Investment
  - b. Change in Stock or Inventory Investment
- 3. Net Export(X-M)**
  - a. Export(X)

- b. Import(M)

## Components of Domestic Income :

1. Compensation of Employees
  - a. Wages and salaries(Cash/or kinds)
  - b. Employers Contribution of Social security Schemes
2. Operating surplus
  - a. Rent
  - b. Interest
  - c. Profit
    - i. Corporate Tax
    - ii. Dividend
    - iii. Undistributed corporate profit
3. Mixed Income for self-Employed person

Net Factor Income from Abroad NFIA = It is difference between factor income received/earned by normal residents of a country and factor income paid to non-residents of the country.

## Components of NFIA :

1. Net Compensation of Employees
  2. Net Income from Property and entrepreneurship
  3. Net Retained earning of resident companies abroad
- Hints :NFIA : Net Factor Income Earned from Abroad.  
 NFIA = Factor Income Received from Abroad.  
 – Factor Income Paid to Abroad.

OR

NFIA = Net compensation of Employees

Net income from property and entrepreneurship.

+ Net retained earning of resident companies abroad.

**Net National Disposable Income (NNDI):** It is defined as net national product at Market price plus net current transfer from rest of the world.

$NNDI = NNP_{MP}$

+ Net current transfers from rest of the world.

= National income + net indirect tax + net current transfers from the rest of the world.

Gross National Disposable Income (Gross NDI =  $GNP_{MP}$  + Net current Transfers from

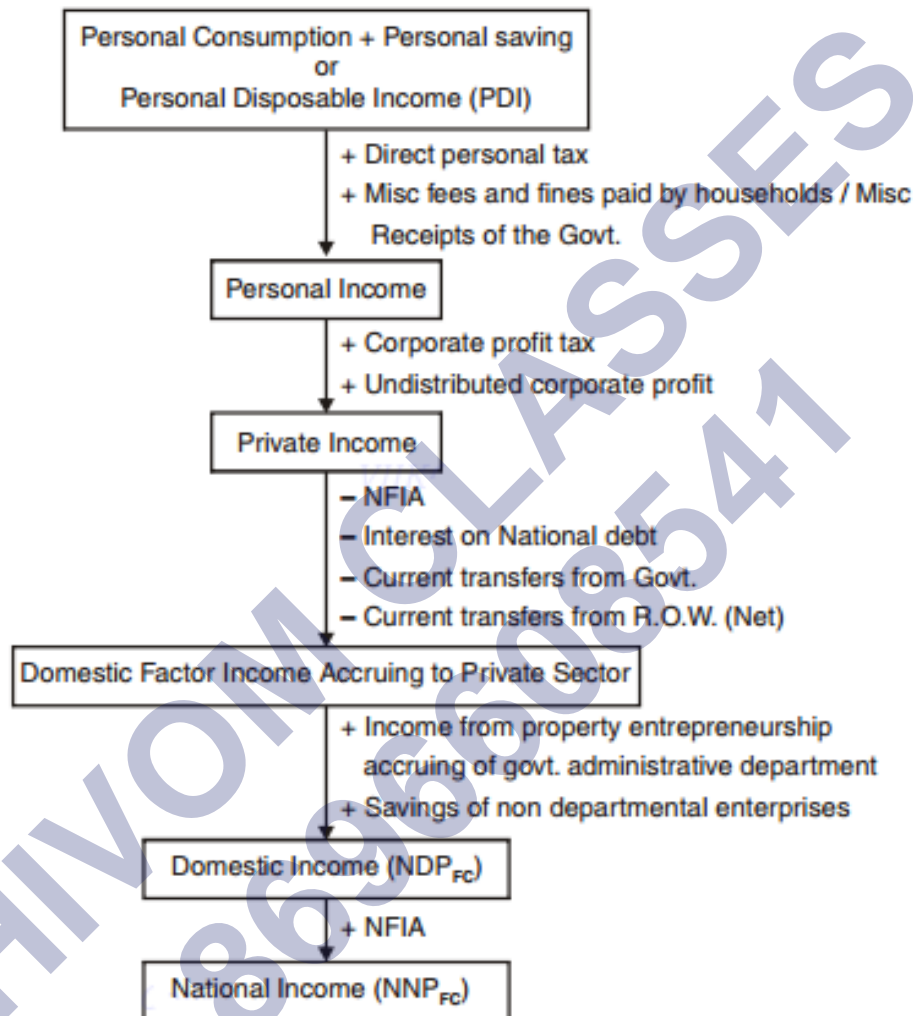
rest of the world.

Net National Disposable Income (Net NDI) =  $NNP_{MP}$  + Net current Transfers from rest of the world.

OR

= Gross NDI – Depreciation.

#### $NNP_{FC}$ from Personal Disposable Income

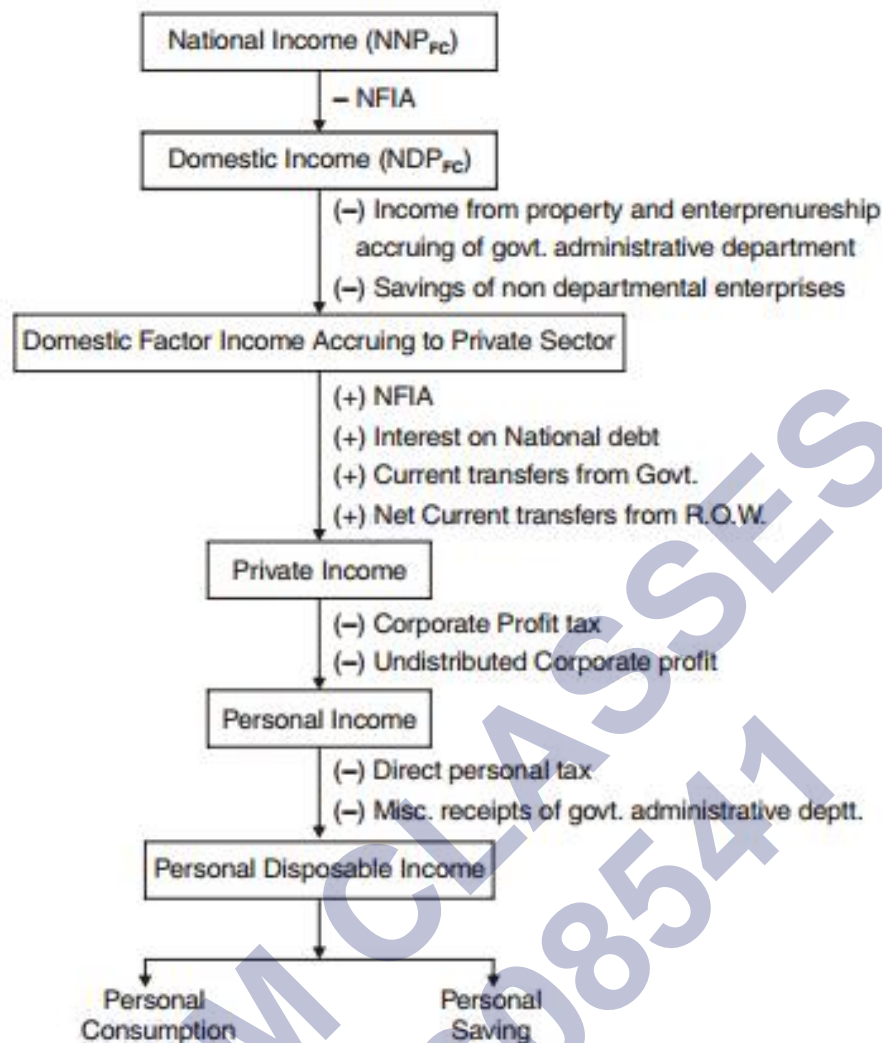


### Concept of Value Added of One Sector or One Firm

1. Value output = Sales + Change in Stock. or value of output = price  $\times$  qty. sold +  $\Delta S$ .
2. Gross value added at market price ( $GVA_{MP}$ ) = Value of output – Intermediate consumption.
3. Net value added at market price ( $NVA_{MP}$ ) =  $GVA_{MP}$  – Depreciation.
4. Net value added at factor cost ( $NVA_{FC}$ ) =  $NVA_{MP}$  – Net indirect tax.

Note: By adding up  $NVA_{FC}$  of all the sectors, we get  $NVP_{FC}$  or Domestic Income.

Personal Disposable Income from National Income ( $NVP_{FC}$ )



**Private Income** : Private income is estimated income of factor and transfer incomes from all sources to private sector within and outside the country.

**Personal Income** : It refers to income received by house hold from all sources. It includes factor income and transfer income.

**Personal Disposable Income** : It is that part of Personal income which is available to the households for disposal as they like.

### GDP and Welfare :

In general GDP and Welfare are directly related with each other. A higher GDP implies that more production of goods and services. It means more availability of goods and services. But more goods and services may not necessarily indicate that the people were better off during the year. In other words, a higher GDP may not necessarily mean higher welfare of the people. There are two types of GDP:

**Real GDP** : When the goods and services are produced by all producing units in the domestic territory of a country during an a/c. year and valued these at base year's prices or constant price, it is called real GDP or GDP at constant prices. It changes only by change in physical output not by change price level. It is called a true indicator of economic development.

**Nominal GDP** : When the goods and services are produced by all producing units in the

domestic territory of a country during an a/c. year and valued these at current year's prices or current prices, it is called Nominal GDP or GDP at current prices. It is influenced by change in both physical output and price level. It does not consider a true indicator of economic development.

Conversion of Nominal GDP into Real GDP

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price index}} \times 100$$

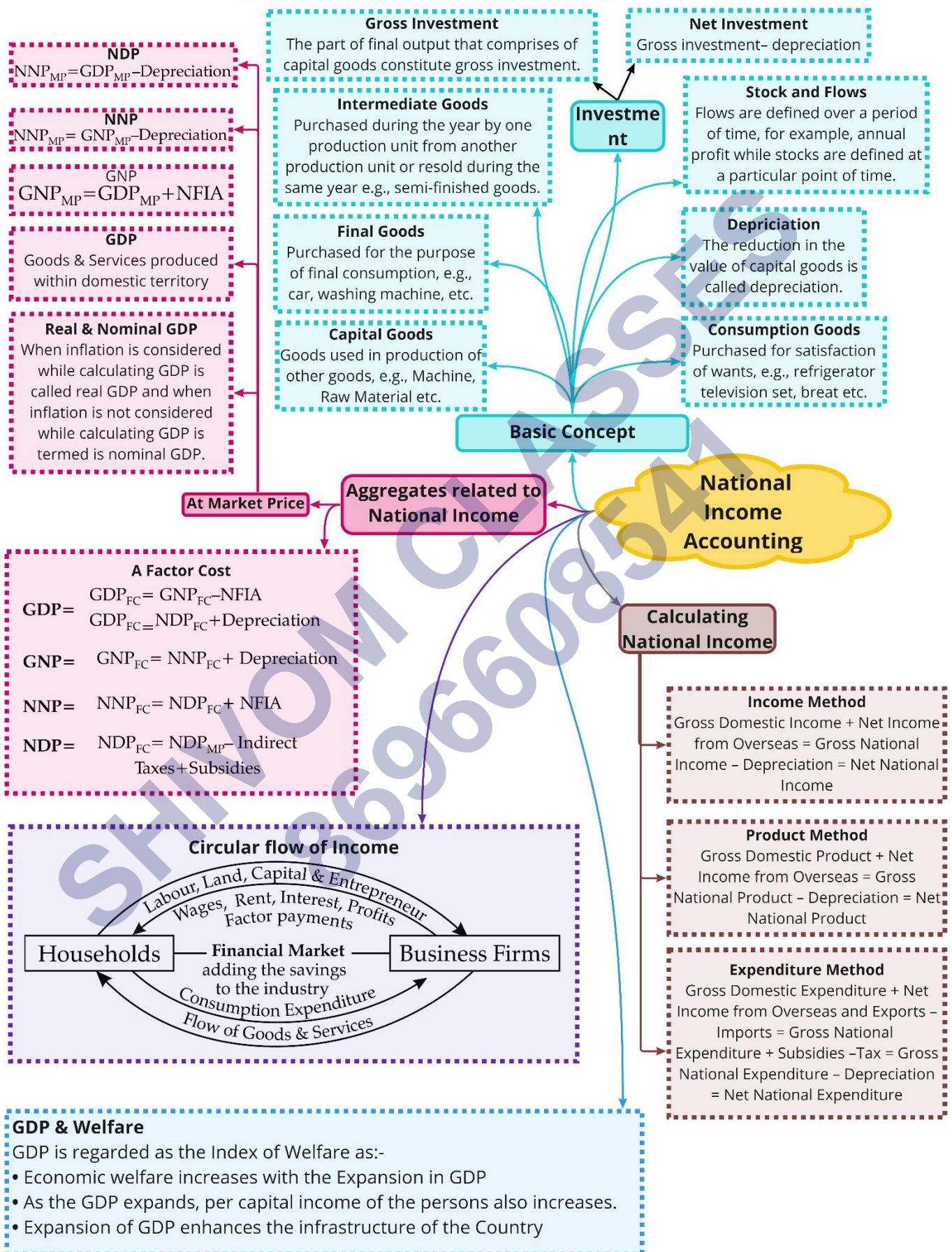
Price index plays the role of deflator deflating current price estimates into constant price estimates. In this way it may be called GDP deflator.

**Welfare** mean material well being of the people. It depends on many economic factors like national income, consumption level quality of goods etc and non-economic factor like environmental pollution, law and order etc. the welfare which depends on economic factors is called economic welfare and the welfare which depends on non-economic factor is called non-economic welfare. The sum total of economic and non-economic welfare is called social welfare. Conclusion thus GDP and welfare directly related with each other but this relation is incomplete because of the following reasons.

### Limitation of percapita real GDP/GDP as a indicator of Economic welfare :

- Non-monetary exchange
- Externalities not taken into GDP but it affects welfare.
- Distribution of GDP.
- All product may not contribute equally to economic welfare.
- Contribution of some products may be negative.
- Inflation may give falls impression of growth of GDP.

Class : 12th Economics (Macroeconomics)  
Chapter-2: National Income Accounting



## Important Questions

### Multiple Choice questions-

Q1. Macro Economics Studies:

- (a) Employment opportunities in the economy
- (b) Theory of supply of Commodities
- (c) Elasticity of demand in Scooter
- (d) Price of wheat in the market

Q2. Who had made the first attempt at National Income Accounting?

- (A) Prof. D.R.Gadgill
- (B) Simon Kuznets
- (C) J.M.Keynes
- (D) Gregory King

Q3. When did the great depression occur?

- (a) 1929-30
- (b) 1934-35
- (c) 1938-39
- (d) 1941-42

Q4. Who is known as the father of modern macroeconomics?

- (a) Adam Smith
- (b) J. M. Keynes
- (c) Samuelson
- (d) Hicks

Q5. Mr. Skund Kumar wants to study the national income. Which branch of economics will he have to study?

- (a) Microeconomics
- (b) Price theory
- (c) Factor price determination
- (d) Macroeconomics

Q6. Accounting of National Income at constant prices is known as .....

- (a) Money income
- (b) Real income
- (c) Current income



(d) Domestic income

Q7. Which of the following items are excluded from GNP measurement?

(a) Purely financial transactions

(b) Transfer of used goods and non-market goods and services

(c) Illegal activities and the value of leisure

(d) All of these

Q8. The subject of the Study of Macro Economics is:

(a) The Principle of National Income

(b) The Principle of Consumer

(c) The Principle of Producer

(d) None of these

Q9. Macro Economics Studies:

(a) Employment opportunities in the economy

(b) Theory of supply of Commodities

(c) Elasticity of demand in Scooter

(d) Price of wheat in the market

Q10. General Price Level is studied in:

(a) Micro Economics

(b) Macro Economics

(c) Both (a) and (b)

(d) None of these

Q11. Employment Theory is related to :

(a) Static Economics

(b) Micro Economics

(c) Macro Economics

(d) None of these

Q12. Increase in Stock of Capital is known as:

(a) Capital Loss

(b) Capital Profit

(c) Capital Formation

(d) None of these

Q13. Which one of the following is included in circular flow?

(a) Real Flow

- (b) Money Flow
- (c) Both (a) and (b)
- (d) None of these

Q14. Which one of the following is included in 'Stock'?

- (a) Quantity of Money
- (b) Wealth
- (c) Quantity of wheat stored in a warehouse
- (d) All the above

Q15. Which one is included inflow ?

- (a) Consumption
- (b) Investment
- (c) Income
- (d) All of these

### Very Short Questions-

1. What is national disposable income?
2. What is real flow?
3. Define money flow.
4. What must be added to domestic factor income to obtain national income?
5. Explain the meaning of non-market activities.
6. Define Real GNP.

### Short Questions-

1. Distinguish between personal income and private income.
2. Explain the main steps involved in measuring national income through the product method.
3. What is double counting in the economy? How can it be avoided?
4. Do you agree with the statement, 'Machine purchased is always a final good'. Give reason for your answer.
5. What are the precautions to be taken while calculating national income through product method, specially value-added method?

### Long Questions-

1. Calculate net value added at market price of a firm:

Items	Amount
Sale	300
Change in stock	-10
Depreciation	20
Net in direct taxes	30
Purchase of machinery	100
Purchase of intermediate product	150

2. Calculate national income and gross national disposable income from the following data:

S.No	Contents	Rs. (in crores)
1	Net indirect tax	05
2	Net domestic fixed capital formation	100
3	Net exports	(-) 20
4	Government's final consumption expenditure	200
5	Net current transfers from abroad	15
6	Private final consumption expenditure	600
7	Change in stock	10
8	Net factor income from abroad	05
9	Gross domestic fixed capital formation	125

3. Calculate NNP at market price by production method and income method.

S.No	Contents	Rs. (in crores)
1	Intermediate consumption	500
	Primary sector	400
	Secondary sector	300
	Tertiary sector	
2	Value of output of Primary sector	1000
	Secondary sector	900
	Tertiary sector	700
3	Rent	10
4	Emoluments of employers	400
5	Mixed income	650
6	Operating surplus	300

7	Net factor income from abroad	-20
8	Interest	05
9	Consumptive of fixed capital	40
10	Net indirect tax	10

4. Giving reason, explain whether the following are included in domestic product of India.

- Profits earned by a branch of foreign bank in India
- Payment of salaries to its staff by embassy located in New Delhi
- Interest received by an Indian resident from its abroad firms

5. Calculate National Income and Private Income from the following data.

S.No	Contents	Rs. (in crores)
1	Net current transfers from rest of the world	10
2	Private final consumption expenditure	600
3	National debt interest	15
4	Net exports	(-)20
5	Current transfers from government	5
6	Net domestic product at factor cost accruing to the government.	25
7	Government final consumption expenditure	30
8	Net indirect tax	05
9	Net domestic capital formation	40
10	Net indirect tax	10

### Case Study Based Question-

- Read the following hypothetical text and answer the given questions: -
- Read the following hypothetical text and answer the given questions: -

### Assertion Reason Type Question-

- In these questions, a statement of assertion followed by a statement of reason is given. Choose the correct answer out of the following choices.
  - Both Assertion and Reason are true and Reason (R) is the correct explanation of Assertion (A)
  - Both Assertion and Reason are true and Reason (R) is not the correct explanation of Assertion (A)
  - Assertion (A) is True but Reason (R) is False
  - Assertion (A) is False but Reason (R) is True

**Assertion:** Value Added Method, Income Method, and Expenditure Method are three

different methods to measure the National Income.

**Reason:** Production, Income, and Expenditure are three different phases of the circular flow of Income.

2. In these questions, a statement of assertion followed by a statement of reason is given. Choose the correct answer out of the following choices.
- Both Assertion and Reason are true and Reason (R) is the correct explanation of Assertion (A)
  - Both Assertion and Reason are true and Reason (R) is not the correct explanation of Assertion (A)
  - Assertion (A) is True but Reason (R) is False
  - Assertion (A) is False but Reason (R) is True

**Assertion:** National Income is a national Concept.

**Reason:** National Income includes the value of final goods and services produced in the entire world by all producers who are normal residents of the country.

### MCQ Answers-

- (a) Employment opportunities in the economy
- (D) Gregory King
- (a) 1929-30
- (b) J. M. Keynes
- (d) Macroeconomics
- (b) Real income
- (d) All of these
- (a) The Principle of National Income
- (a) Employment opportunities in the economy
- (b) Macro Economics
- (c) Macro Economics
- (c) Macro Economics
- (c) Both (a) and (b)
- (d) All the above
- (b) Investment

### Very Short Answers-

- Ans: The term "national disposable income" refers to the amount of money available to the entire economy for spending or disposition.

The formula for calculating national disposable income is  $NNPMP + \text{Net Current}$

Transfers from Abroad (NDI).

2. Ans: The flow of services and goods between various segments is referred to as real flow. Flow sector services, for example, flow from household to firm and then back again.
3. Ans: The flow of money between different sectors of the economy, such as firms, households, and so on, is referred to as money flow. For example, consider the flow of income from firms to households and the flow of consumption expenditure from households to firms.
4. Ans: To calculate the national income, net factor income from outside the country must be added to domestic factor income.
5. Ans: Non-marketing activities are those that are gained as a result of the purchase of a large number of finished goods and services. They are really not bought and sold on the open market. Vegetables, for example, cultivated in the house kitchen garden.
6. Ans: In economics, real GNP is defined as GNP computed at constant prices, or through a base year price.

### Short Answers-

**Ans 1:** The distinction between the two is as follows:

Individuals' personal income is the sum of their earned and transfer revenues from all sources of income, both within and outside the country.

Personal Income is computed as follows: Private Income – Corporate Tax – Corporate Savings (undistributed profits)

Factor and transfer income obtained from all private sources within and outside the country is classed as private income.

Personal income (PI)  $\equiv$  NI – Undistributed profits – Net interest payments made by households – Corporate tax + Transfer payments to the households from the government and firms.

**Ans 2:** The most important steps in calculating national income using the product approach:

1. First, divide the manufacturing units into industrial sectors such as primary, secondary, and tertiary.
2. Next, calculate the factor cost's net value added.
3. In the third phase, calculate the output value by adding sales and stock changes.
4. Calculate gross value added by deducting intermediate consumption from output value.
5. Subtract depreciation and net indirect tax from gross value added at market price to get NDPFC (net value added at factor cost).
6. Finally, add net factor income from outside the country to NDPFC to get NNPF, C,

which is national income once more.

**Ans 3:** Doubt counting is the process of calculating the value of goods multiple times at each stage of production.

The following methods can be used to avoid it:

- a) When estimating national income, use the value-added technique.
- b) Calculating national income only on the basis of the final commodity's worth.

**Ans 4:** Yes, we agree with the assertion made here. It is up to the user to decide if a machine is a finished product or not. When a machine is purchased by a household, it is referred to as a final good. On the other hand, if a machine is purchased by a business, it is referred to as a final good. However, if it is purchased by a company for resale, it is referred to as an intermediate good.

**Ans 5:** The steps will be as follows:

- a) Instead of relying on the value added by each production unit, avoid using the production's doubt counting approach.
- b) Inclusion of output produced for self-consumption.
- c) The cost of intermediary consumption should never be taken into account.
- d) The sale and acquisition of used products should never be included.
- g) The value of services rendered must always be factored into sales.

### Long Answers-

**Ans 1:** Value of output: - Sale + Change in stock  $(300 + (-) 10 = 290/-)$

Gross Value added at MP = Value of output - Purchase of intermediate product.

$290 - 150 = 140/-$

Net Value added at MP = Gross Value added at MP - Depreciation

$140 - 20 = 120/-$

Thus, the final answer is Rs. 120.

**Ans 2:** Putting the equation together

Net national income (NNPFC) = Net disposable income (NNDPM)

= (Government final consumption expenditure + private final consumption expenditure + net domestic fixed capital formation + net exports)

=  $200 + 600 + 100 + 10 + (-) 20$

=  $910 - 20 = 890$

So NDP MP = 890 crores

NNPFC = NNDPM + (Net factor income from abroad – Net indirect tax)

=  $890 + 5 - 5$

So NNPF = 890 crores

Depreciation = (Gross domestic fixed capital formation - Net domestic fixed capital formation)

= 125 - 100 = 25 crores

GNDI = (NNPF + Net indirect tax + Net current transfers from abroad + Depreciation)

= 890 + 05 + 15 + 25

GDNI = 935 crores

**Ans 3:** 1. By Production Method:

Value added at MP = Value of output - Intermediate consumption

= (1000 + 900 + 700) - (500 + 400 + 300)

= 2600 - 1200

Hence GDPMP = 1400 crores

NNPMP = GDPMP - (Consumptive of fixed capital + Net factor income from abroad)

= 1400 - 40 = (-20)

NNPMP is equal to 1380 crores

2. By Income Method:

NNPMP = Emoluments of employers + Mixed income + Operating surplus + Net indirect tax + Net factor income from abroad

= 400 + 650 + 300 + 10 + (-20)

NNPMP = 1350 + 10 - 20

= 1340 crores

**Ans 4:**

1. Profits earned by a foreign bank branch in India are included in India's domestic income because they are earned within the country's borders.
2. Since the embassy in New Delhi is not part of India's domestic territory, salaries paid to its employees will not be included in the country's domestic income.
3. Interest received by an Indian resident from his or her foreign enterprises is not included in India's domestic income because it is a factor income.

**Ans 5:** a) National Income (NNPF) = (Private final consumption expenditure + Government final consumption expenditure + Net domestic capital formation + Net exports + Net factor income from abroad - Net indirect tax)

= 600 + 100 + 70 + (-20) + 10 - 30

= 780 - 50

= 730 crores



b) Private Income = NNPF - Net domestic product at factor cost accruing to govt +  
Transfer payments + National debt interest  
= 730 - 25 + (10 + 5) + 15  
= 760 - 25  
= 735 crores

### Case Study Answer-

1. Answer:

1. a) absolute poverty
2. Poverty line
3. Consumption
4. per capita expenditure

2. Answer:

1. d) All of the above
2. Casualization
3. Gini Coefficient
4. d) all the above

### Assertion Reason Answer-

1. a) Both Assertion and Reason are true and Reason (R) is the correct explanation of Assertion (A).
2. a) Both Assertion and Reason are true and Reason (R) is the correct explanation of Assertion (A).