

NATIONAL INCOME ACCOUNTING

National Income and Product Accounts

- ***National income and product accounts*** are data collected and published by the government describing the various components of national income and output in the economy.
- The Department of Commerce is responsible for producing and maintaining the “National Income and Product Accounts” that keep track of GDP.

Need for National Income Accounting

- **Indicates Economic Growth:** – it indicates performance and the level of economic growth in an economy. The data on national income and per capita display the true picture of the health of an economy. If both are increasing continuously, it surely reflects an increase in economic welfare, otherwise not.
- **Helps in Policy Formulation:** – Statistical data on national income not only helps in making economic analysis but also helps in policy formulation. Moreover it not only helps in formulating fiscal policy, monetary policy, foreign trade policy but also helps in making modifications and amendments wherever necessary.

Need for National Income Accounting

- Helpful in Making Comparisons – it helps us in comparing national income and per capita income of our country with those of other countries. This may lead us to make suitable changes in our plans and approach to achieve rapid economic development of our country.
- Helpful to Trade Unions – National accounts throw light on distribution of factor incomes which is very helpful to trade unions and other labour organizations in making rational analysis of the remuneration the laborers are getting.
- Distribution of income – National income accounting describes distribution of national income in terms of factors like interest, rent, profit & wages. It also shows the relative significance of the factors of production in the economy.

Need for National Income Accounting

- Helpful in economic planning – National income accounting is helpful in economic planning. The planning commission comes to know about the resources available for economic planning.
- Structural changes in the economy – National income accounting is helpful in providing knowledge of structural changes in the economy. We are able to know that decrease or increase in share of agriculture and industry in national income.
- Facilitates forecasting – National income accounting is helpful in forecasting the effect of economic policies on the level of production & employment

Gross Domestic Product

- ***Gross domestic product (GDP)*** is the total market value of all final goods and services produced within a given period by factors of production located within a country.
- GDP is a measure of the economic prosperity of a country compiled as output or income. There is a strong correlation between the development in GDP and changes in several important social factors, including tax payments and unemployment and, to a lesser extent, health and education.
- However, GDP is regularly criticized for not presenting a fair view of welfare. If GDP is a poor measure of welfare, focusing one-sidedly on increasing GDP may lead to misguided political decisions

Calculating GDP

Product Method

- Known as value added method
 - Value added is the difference between the value of goods as they leave a stage of production and the cost of the goods as they entered that stage.
 - Value added is the increase in value that a firm contributes to a product or service.
 - It is calculated by subtracting intermediate goods from the value of its sales.
 - We use the value added method to avoid the double counting.

Value added method

- STEPS

1. Classification of Productive Enterprises :

(a) Primary Sector: It produces goods by exploiting natural resources like land, water, forests, rivers, etc. It includes all agricultural and allied activities like fishing, forestry, mining and quarrying.

(b) Secondary Sector: It is also known as manufacturing sector. It transforms one type of commodity into another using men, machines and materials. For example, manufacturing of fabric from cotton and sugar from sugarcane. ❓

(c) Tertiary Sector: It is also known as services sector which provides services like banking, insurance, transport, communication, trade and commerce, etc, to primary and secondary sectors.

Value added method

2. Calculation of Value Added = Value of Output (-) Value of Intermediate Consumption
3. Calculation of Domestic Income =NDPFC
4. Calculation of National Income =NFIA

- Value Addition

Stage of Production	Value of intermediate good	Value of Sales	Value-added
Farmer - Palay		12,000	12,000
Rice Miller -Milled	12000	15000	3000
Retailers - Rice	15000	20000	5000
GDP= Total Value Added			20000

- In product method we calculate the aggregate annual value of goods and services produced in a year. It is also known as the Value Added method. In this method GDP is the sum of Gross Value Added by the entire production units in the economy. The term that is used to denote the net contribution made by a firm is called its value added.
- Simply it is the difference between value of output and input/ raw material/ intermediate product at each stage of production is called value added.
- the value added (value addition) of a firm = value of production of the firm (-) value of intermediate goods used by the firm.

- Gross Value Added = (gross)Value of Output – (gross)Value of intermediate goods
 - value of output =[sales + change in stock] –intermediate consumption
 - If we include depreciation in value added, then the measure of value added that we obtain Gross Value Added. If we deduct the value of depreciation from Gross Value Added, we obtain Net Value Added.
- Net Value Added (NVA or NDPFC) = Value of output – Intermediate consumption – Consumption of fixed capital – Net indirect taxes
- Net Value Added at Market Price = Net Domestic Product at Market Price = Gross Value Added at Market Price – Depreciation
- Net Value Added at Factor Cost = Net Domestic Product at Factor Cost = Net Domestic Product at Market Price – Net Indirect Tax

Procedure

- Under this method, the economy is divided into different industrial sectors such as agriculture, fishing, mining, construction, manufacturing, trade and commerce, transport, communication and other services (primary, secondary, tertiary sectors).
- Then, the net value added at factor cost (NVAFC) by each productive enterprise as well as by each industry or sector is estimated.
- in order to arrive at the net value added at factor cost by an enterprise we have to subtract the following from the value of output of an enterprise :
 - i. Intermediate consumption which is the value of goods such as raw materials, fuels purchased from other firms
 - ii. Consumption of fixed capital (depreciation)
 - iii. Net indirect taxes.

- Summing up the net values added at factor cost (NVAFC) by all productive enterprises of an industry or sector gives us the net value added at factor cost of each industry or sector.
- We then add up net values added at factor cost by all industries or sectors to get net domestic product at factor cost (NDPFC).
- Lastly, to the net domestic product we add the net factor income from abroad to get net national product at factor cost (NNPFC) which is also called national income.

NNPFC (N.I) = GDPMP (-) consumption of fixed capital (Depreciation) (+) Net Factor Income from Abroad (-) Net indirect Tax.

Formulae

- $GVAMP = VOO(\text{Value of output}) \text{ in primary sector} + VOO \text{ in secondary sector} + VOO \text{ in tertiary sector} - \text{cost of intermediate consumption}$

- $NVAFC(NDPFC) = GVAMP - CFC(\text{Depreciation}) - NIT(\text{Net Indirect Tax})$

- $\text{National income}(NNPFC) = NDPFC + NFIA$

Items included and excluded in National Income Estimation by Value Added Method

Items Included	Items Excluded
1. Service of free government dispensary (it is a productive service).	1. Receipt from sale of land (only ownership has changed, no addition to national product has been made).
2. Production done for self-consumption.	2. Intermediate goods (as they cause double counting).
3. Final goods produced in an accounting year.	3. Sale of second hand goods (it also leads to double counting).
4. Rent paid by the tenant (it is a factor income).	4. Purchase of rented house by the tenants (only ownership changes like those of financial transactions).

Precautions to be taken in Product Method

- 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 services of housewives are not included because it is not easy to find out correctly the value of their services.

Precautions to be taken in Product Method

- Value of production for self-consumption are be counted while measuring national income. In this method, the production for self-consumption should be valued at the prevailing market prices.
- Value of intermediate goods must not be counted while measuring value added because this will amount to double counting.

Questions

- Suppose the GDP at market price of a country in a particular year was Rs 1,100 crores. Net Factor Income from Abroad was Rs 100 crores. The value of Indirect taxes – Subsidies was Rs 150 crores and National Income was Rs 850 crores. Calculate the aggregate value of depreciation.

Answer: As per question, GDPMP=1100 crores, NFIA =100 crores, NIT =150 crores, NNPFC = 850 crores

∴ GDPFC= GDPMP- NIT = 1100 – 150 = 950 crores.

GNPFC= GDPFC+ NFIA = 950 + 100 = 1050 crores.

NNPFC = GNPFC + Depreciation 1050 = 850+ Depreciation

Depreciation = 1050 – 850 = 200 crores.

- Calculate net value added at market price of a firm:

<i>ITEMS</i>	<i>(Rs. IN THOUSAND)</i>
<i>i. Sale</i>	<i>700</i>
<i>ii. Change in stock</i>	<i>40</i>
<i>iii. Depreciation</i>	<i>80</i>
<i>iv. Net in direct taxes</i>	<i>100</i>
<i>v. Purchase of machinery</i>	<i>250</i>
<i>vi. Purchase of intermediate product.</i>	<i>400</i>

Value of Output = Sale + change in stock $700 + 40 = 740$

NVA at mp = Value of output - purchase of intermediate product – depreciation

= $740 - 400 - 80 = 260$ thousands

Ans. 260/- thousand

2. Calculate sales from the following data (Delhi 2013)

S.No.	Contents	₹ (in lakhs)
(i)	Intermediate Cost	700
(ii)	Consumption of Fixed Capital	80
(iii)	Change in Stock	(-)50
(iv)	Subsidy	60
(v)	Net Value Added at Factor Cost	1300
(vi)	Exports	50

Ans. Gross Value Added at Market Price (GVA_{MP}) = Net Value Added at Factor Cost (NVA_{FC})
- Subsidies + Consumption of Fixed Capital

$$GVA_{MP} = ₹ 1300 - 60 + 80$$
$$= ₹ 1320 \text{ lakh}$$

$GVA_{MP} = \text{Value of Output (Sales + change in Stock)} - \text{Intermediate Cost}$ (2)

$$1320 = \text{Sales} + (-50) - 700$$

$$\text{Sales} = 1320 + 50 + 700$$

- Calculate intermediate consumption

S.No.	Contents	₹ (in lakhs)
(i)	Value of Output	200
(ii)	Net value Added at Factor Cost	80
(iii)	Sales Tax	15
(iv)	Subsidy	5
(v)	Depreciation	20

Ans. Intermediate Consumption = Value of Output – Net Value Ac
at Factor Cost (NVA_{FC}) + Depreciation + (Sales Tax-Subsidy)
= $200 - [80 + 20 + (15 - 5)]$
= Rs 90 lakh