

National Income (NI) National Product (NP)

The final value of goods and services that are produced by the citizens of the country during a given period of time is called as National Product.

National Income (NI) Aggregates

There are no of aggregates related to NI. To understand these aggregates its important to know the following relations

(1) Domestic Product (DP) & National Product (NP):

DP is defined as the value of all final goods & services produced within the domestic territory of the country.

NP refers to the amount of final goods & services produced by the normal residents of the country whether operating within the domestic territory or outside.

The difference between Domestic Product & National Product is known as Net factor income from abroad (NFIA). NFIA is the difference between the factor incomes incurred from rest of the world & the factor income earned by rest of the world. Thus

$$\mathbf{NP = DP + NFIA}$$

$$\mathbf{DP = NFIA - NP}$$

(2) National Product at market price is the value of final goods & services produced by normal residents of a country calculated at market price. National Product at factor cost expresses National Product as the sum of all factor payments i.e. wages, interest, rent & profit. The difference b/w market price & factor cost is net indirect taxes (NIT)
NIT = indirect taxes – subsidies.

Thus,

$$\mathbf{NP \text{ at factor cost} = NP \text{ at market price} - NIT}$$

Or

$$\mathbf{NP \text{ at factor cost} = NP \text{ at indirect taxes} + \text{subsidies}}$$

(3) Gross Domestic Product (GDP) & Net Domestic Product (NDP): The difference between gross & net is depreciation of fixed capital. It means loss of value of fixed capital assets during the production of process due to normal wear & tear. Gross Product includes depreciation & Net product excludes depreciation.

Thus,

$$\mathbf{GDP = NDP + \text{depreciation}}$$

NDP = GDP + depreciation

National income Aggregates :

(1) GDP at market price : The market value of all final goods & services produced during a year within the domestic territory of the country . There are 3 important observation related to this –

- (a) It is a Gross Product which means it includes depreciation in it.
- (b) It is a Domestic Product because it includes all goods & services which are produced in the domestic territory of the country. It does not matter whether the production is done by domestic or foreign companies.
- (c) Value of final goods & services i.e. only the market value of final goods & services is taken into account.

(2) GNP at market price : GNP mp the monetary value of all final goods & services produced in the domestic territory of the country during the year including Net factor income abroad.
Thus,

GNP mp = GDP mp + NIFA

The difference between GDP mp & GNP mp is NIFA. NIFA is the income received from abroad for rendering factor services by the normal residents of the country to rest of the world & the income paid for factor service rendered by non residents in the domestic territory of the country.

The 3 components of NIFA –

- (1) Net compensation of employees from abroad i.e. wages, in cash & kind both.
- (2) Net property & entrepreneurial income from abroad i.e. rent, interest profit, dividend . etc
- (3) Net retained earnings of resident companies Working in foreign countries.

NIFA can be both +ive -tive .When NIFA is +tive $GNP > GDP$.If NIFA is –ive then $GNP < GDP$ & if NIFA is zero then $GNP = GDP$

(3) NDP at market price : NDP mp is market value of all final goods & services produced with in the domestic territory of the country during the year excluding depreciation

NDPmp = GDPmp - Depreciation

OR

NDPmp = GNPmp – NIFA – Depreciation

(4) NNP at market price : NNPmp is the market value of all final goods & services produced by the normal residents of the country by making allowances for depreciation.

$$\text{NNPmp} = \text{NDP mp} + \text{NFIA}$$

Or

$$\text{NNPmp} = \text{GNPmp} - \text{dep}$$

Or

$$\text{NNPmp} = \text{GDPmp} - \text{dep} + \text{NFIA}$$

(5) GDP fc : It is the sum total of factors income (rent + interest + profit + wages) generated with in the domestic territory of a country along with the consumption of fixed capital.

(depreciation). Thus,

$$\text{GDP fc} = \text{GDP mp} - \text{NIT}$$

$$\text{GDP fc} = \text{GNPmp} - \text{NFIA} - \text{NIT}$$

(6) GNP fc : It is the sum total of earnings received by various Factors of Production in terms of wages , rent, interest etc by normal residents of a country. Thus ,

$$\text{GNPfc} = \text{GDPfc} + \text{NFIA}$$

Or

$$\text{GNPfc} = \text{GNPmp} - \text{NIT}$$

Or

$$\text{GNP fc} = \text{NNPmp} - \text{NIT} + \text{Depreciation}$$

Or

$$\text{GNPfc} = \text{NNPfc} + \text{depreciation}$$

(7) NDP fc : It is the sum total of factor incomes generated within the domestic territory of the country after deducting depreciation. Thus

$$\text{NDPfc} = \text{GDPfc} - \text{depreciation}$$

$$\text{Or NDPfc} = \text{NDPmp} - \text{NIT}$$

$$\text{Or GNPfc} - \text{depreciation} - \text{NFIA} = \text{NDPfc}$$

$$\text{Or NNPfc} - \text{NFIA} = \text{NDPfc}$$

It is known as domestic factors income. It includes-

(1) Compulsation of employees – It is the payment made by the producers in cash & kind both in return of labour services.

(2) Operating surplus – It is the income earned from property and entrepreneurship. eg : rent, interest, profit, dividend etc.

(3) Mixed income- Income earned by self employed people which is composite of labour income & property.

NNPfc as N.I. : It is the sum total of factors income earned by normal residents of country during the year. It also known as National income.

$$\text{NNPfc} = \text{GNPfc} - \text{depreciation}$$

$$\text{NNPfc} = \text{NNPmp} - \text{NIT}$$

$$\text{NNPfc} = \text{NDPfc} + \text{NFIA}$$

NNPfc = Domestic factor income +NFIA

Disposable income aggregates :

Disposable income Aggregates are derived from National income aggregates taking into account of certain types of transfer payments for which no productive services are rendered in the current year .e.g. old age pension,unemployment allowances etc.(not included in NI as they do not contribute in current yr.)

Transfer payments are of two types-

- 1- Current transfer is one which is made out of the current income of the payer & adds to the current income of the receiver.
- 2- Capital Transfer is one which is paid out of wealth of the payer & adds to the wealth of the receiver. In economics we are only concerned with the current transfer
- 3- Disposable income is income inclusive of all current transfers. Thus, $DI = \text{Income} + \text{net current transfers}$

Net current transfer can be both + ve & - ve. If net current transfer are + ve disposable income will be higher than the income. On the other hand if net current transfer are - ve disposable income will be lower than the income.

Personal income: It is actual income received by persons from all persons in the form of factor income and current transfer payment during the year.

PI = private income – undistributed profit – corporate profit tax – retained earnings of foreign companies.

It is useful in finding the purchasing power that is actually there in the hands of the people PI is known as Pre-tax income also.

Personal Disposable Income (PDI): PDI is That part of PI which is available to the individuals to be used the way they like.

PDI = PI – Personal taxes – misc.Receipts of the govt admn. Department (fines, fec) .

Disposable income is always less than PI because it is the income which we get after deducting all types of personal taxes. Thus

PDI = consumption + saving.

Some other aggregates of NI are :

(1) Per Capita income – PCI is the aggregate income of the normal resident of the country in a particular year. Thus, Per capita income = (total national income/ Total population)

Per capita can be measured at current price as well as at constant prices. When it is measured at constant prices it is called Real per capita income which is very good indicator of economic growth formula to measure PCI is :

PCI = national income at constant prices / Total population

NI at current prices : When NI is measured at prevailing mp is known as NI at current prices. It is called monetary or nominal income also.

NI at constant price-

NI when measured at some base year price is called NI at constant price a real national income. Thus , NI at constant price = NI at constant price x100 / Price index of current yr

Advantages of real national income :

- (1) It reflects the real change in the volume of production of goods & services; hence it is a true indicator of economic progress of the country.
- (2) It enables us to make year wise comparison of changes in the growth of output of goods & services.
- (3) It is often used in making international comparisons.

Green National Product

The Green National Product aims to allocate the omitted environmental degradation and resource depletion in the computation of the gross national product. The green national product indicates whether the activities involved in the production process benefits or harms the economy and the welfare. It revolves around social and economic factors which have been points of focus for many green movements. The green national product is different from the traditional GNP because it addresses both sustainability and the welfare of the planet and its inhabitants. Thus, the aspect of green accounting has gained considerable attention in recent years around the world.

Difficulties in Measuring National Income in a Developing Country

National income figures denote the economic progress of an economy. They also enable to analyze and understand the significance of each sector in an economy. They also reveal the trends in the concentration of economic power and inequalities between the rich all the poor. There three methods for calculating national income. These are production method, income method and expenditure method. There are many involved in measuring national income. They are mentioned as below:

Practical Problems in Measuring National Income

1. Non-monetized sector : Goods and services which are sold and bought in non-monetized sector are not included in national income. Non-monetized sector is prevalent in several under developed countries. Major portion of transaction of goods and services take place in this sector. Such transactions are not recognized and registered by the state authorities. Mere calculation of the value of goods and services in monetized sector is useless in measuring national income figures.

2. Exclusion of free services : Free services like wife's services to the family, maintenance of libraries, parks and reading rooms etc by the government are not included in the calculation of national income. This leads to several peculiar problems. 1) National Income figures does not include some important services meant for the public welfare. 2) The nature of services of several persons in several fields can't be decided easily. If a teacher gives coaching to his children, it is considered a free service. If the same teacher works in a high school, his services are considered remunerative or economic in nature. As a teacher in a school, his services are included in national income figures.

3. Statistical data : Another problem of national income estimates refers to the availability of accurate statistical data and information. Especially in underdeveloped countries, statistician who supervise the calculation of National income figures face several problems in securing correct and accurate information about the output, savings, investment, consumption, income and expenditure of individuals in different spheres.

4. Double counting : Double counting is another problem faced in measuring national income figures. Great care should be taken for avoiding double counting of a commodity. A particular commodity should be counted only once at a particular state.

5. Transfer earnings: income received by individuals productive work like pensions, unemployment relief funds etc. come under the category of transfer earnings. Such transfer earnings are excluded from national income.

6. Income of foreign companies : Another problem relates to the inclusion of income of foreign companies in measuring national income. According to the opinion of International Monetary Fund Experts, Foreign Companies' income has to be included in the national income of those countries where production is organized. But the profits obtained by the branches of foreign companies should be included in the national income of foreign countries.

7. Unproductive activities : The governments of modern states have been spending large amounts on some free services like parks, libraries, recreation, cultural activities, old-age pensions, orphan houses, child care centers, Maternity homes etc. Is it a right step to include such services in National Income? This is a problem which we have to consider. Since these services yield no income, some considered that they have to be excluded in national income. But many

experts are of the view that all Government expenditure should be included in measuring national income.

8. Difficulties of Comparison : Difficulties arise while comparing national income figures of one Country with that of another. This is so because the nature of methods adopted for calculating the national income differ from country to country.

9. Problems due to changes in Market prices : Gross national income figures increase due to an increase in the market prices of goods and services. But the real national product remains the same. Sometimes it falls due to inflationary effects. So this problem arising due to the fluctuations in market prices has to be solved while calculating national income. For this national income estimates are to be made on the basis of constant prices during a year.

10. Special difficulties in under developed countries : Several difficulties are faced in calculating national income in developing countries

- National income estimates may not reveal the real output of these countries due to the dominant role of non-monetized sector in these countries.
- Comprehensive information is not available as the illiterate and uneducated persons does not mention the exact size of Output produced by them.
- Occupational specialization is not found among the individuals in these countries. Individuals get income from different sources. So their income can't be estimated.
- Collection and presentation of statistical data is a complex task due to the lack adequate a) expert statistician, b) statistical organization, c) Literacy and education, d) big entrepreneur.
- The statistical data figures are not reliable.

Conceptual problems in measuring national income: The four factors of production such as land, labor, capital and organization in a country produce a certain volume of goods and services every year. The sum total of these goods and services is called national income. There are many conceptual problems in measuring national income. Some of them are described below:

1. Non-Monetized sector : Some of the goods produced are not sold for money. The producer himself may consume a part of the output. Sometimes, goods are exchanged for goods. Those goods that are not exchanged for money should be taken into National Income. But it is difficult to estimate and measure the value of output which does not enter into market for sale. In the economically backward countries, there is a large non-monetized sector. So, this problem is more difficult in the backward countries.

2. Estimation of services : While estimating the value of services it is difficult to estimate the values of services rendered by mothers or house-wives to the family.

3. Statistical data : Because of illiteracy many producers do not maintain proper accounts regarding output, income and expenditure. Hence, there is no accurate and reliable information.

- 4. Calculation of incomes :** In underdeveloped countries, people are not specialized in a particular occupation. They work in one occupation at one season and another occupation in another season. Hence it is difficult to calculate the national income.
- 5. Lack of information:** There is a general lack of adequate statistical data and this makes the task of estimation more difficult.
- 6. Calculation of depreciation:** The calculation of depreciation on capital goods is another problem. Unless correct deductions are made for depreciation from G.N.P (Gross National Product), the estimate of N.N.P (Net National Product) is bound to go wrong.
- 7. Double counting:** While calculating the National Income, we have to take only the value of finished goods into account, but it is difficult to find out which is final product and which is intermediate good. Hence, we may commit double counting in the estimation of national income.
- 8. Calculation of Expenditure :** The application of the expenditure method too is full of difficulties. It is difficult to estimate all consumption as well as investment expenditure.
- 9. Transfer payments:** While measuring national income through income method, transfer payments should not be included. What should be considered as transfer payment is another conceptual problem in measuring national income.