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PAPER 8B: ECONOMICS FOR FINANCE

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Definition of National Income

National Income: - It is the sum of the money value of final goods & services produced within the country in an accounting year and Net Factor Income from abroad (NFIA).

National Income is the sum of money value of all final goods & services produced by normal residence of a country during an accounting year.

Or

National Income is the sum of Factor Income earned by normal residence of a country in the form of rent, wages, interest & profit in an accounting year within or outside the country.

Usefulness & Significance of National Income Estimates

(a) A comprehensive summary of the economic activity: National in-come estimates give us detailed data relating to a country's production, savings, investment, capital formation and various other economic activi-ties in a particular year. All these data give us a comprehensive picture of the economic activities of the people during that year.

(b) Assessment of the relative importance and progress of the different sectors: The national income data relating to the sources of national income give us an idea of the relative importance of the different sectors (namely, agriculture, industry, trade and commerce, services, etc.) in the economy of the country. The sectoral composition relative consumptions of sec-tors in these three different years indicate the progress and weakness of each of these sectors.

(c) Measuring the rate of growth and the per capita income: The annual rate of increase in national income is considered to be the rate of economic growth of a country. Moreover, the per capita income of the people of a country is also calculated dividing the national income by the total popula-tion of a country in a particular year.

(d) Indispensable to government for framing policies and programmes: The government of a country is to frame its economic policies and pro-grammes on the basis of the estimates of the different components of national income. The importance of these estimates has increased consider-ably in developing countries in framing their future development plans.

(e) The pivot of economic planning: National income estimates consti-tute the pivot of economic planning as the entire machinery of planning is based on **"an appraisal of existing resources and an accurate diagnosis of deficien-cies"** furnished by the national income estimates. These estimates enable the government to determine the allocation of the country's resources on the different heads of development.

(f) Measurement of inflationary and deflationary gaps: Modern econo-mists take the help of the national income data for measuring the inflation-ary or deflationary gaps found at any time in a country.

(g) Social accounting and the framing of the budget: National income figures serve as the background of 'Social Accounting' and the govern-ment's annual budgets are also framed in the context of the country's national income estimates.

(h) Comparison of living conditions: The national income data are also very useful for comparing the overall economic conditions, especially living conditions of the people of the different countries and at different times.

Different Concepts of National Income

I. GDP_{MP} (Gross Domestic Product at market price)

GDP is considered to be the primary measure as it is widely used by policy makers and economists. It is defined as the market value of all final goods and services produced within the domestic territory of an economy during an accounting year. Since GDP is measured at market price, it is expressed as GDP_{MP}.

The term **Gross** indicates that depreciation is included.

The word **Domestic** denotes production of final goods and services within the domestic territory of the country.

The word **Product** indicates current value of only final goods and services produced. The value of intermediate goods such as raw materials is not included.

Different Concepts of National Income

II. GNP_{MP} (Gross National Product at market price)

The term gross national product is a wider concept than domestic product. It includes not only the current money value of all final goods and services produced within the domestic territory of a country but also Net Factor Income from Abroad (NFIA).

$$\mathbf{GNP_{MP} = GDP_{MP} + NFIFA}$$

NFIFA: - Factor income earned from abroad by residents **less** factor income of non-residents in domestic territory.

Nominal GDP Vs. Real GDP

GDP at Current Prices/Nominal GDP

If goods & services produced in a year are valued at the prices of these goods & services in the market in that particular year, we get GDP at current prices. For e.g., to calculate the GDP for the year 2021-22, If we use the prices of the goods & services which are prevailing in the year 2021-22 to value these goods & services then the GDP estimated for the year 2021-22 is said to be GDP at current prices. It is also called Nominal GDP.

GDP at Constant prices/Real GDP

If goods & services produced in a year are valued at fixed prices, i.e., prices of the base year, we get GDP at constant prices.

For, e.g.:- If goods & services produced during the year 2021-22 are valued at the prices of the base year, i.e. year 2011-12. It will be called GDP at constant prices for the year 2021-22. It is also called as Real GDP.

GDP Deflator

- The GDP price deflator measures the changes in prices for all the goods and services produced in an economy.
- Using the GDP price deflator helps economists compare the levels of real economic activity from one year to another.
- The GDP price deflator is a more comprehensive inflation measure than the Consumer Price Index (CPI) index because it isn't based on a fixed basket of goods.
- This ratio helps show the extent to which the increase in gross domestic product has happened on account of higher prices rather than increase in output.

GDP Price Deflator = (Nominal GDP ÷ Real GDP) × 100

GDP Deflator

The calculation below would help us understand the concept of **GDP deflator equation** in better detail. Let us consider the following example to see **how to calculate the GDP deflator**:

The data to be used is provided below:

Year	Nominal GDP	Real GDP
2010	7,500	7,500
2011	8,850	8,000
2012	10,240	8,850
2013	10,620	9,912
2014	11,611	11,352
2015	13,082	11,973

GDP Deflator

Therefore, the GDP deflator calculation for all years will be as follows: –

	A	B	C	D	E
1	Year	Nominal GDP	Real GDP	GDP Deflator	
2	2010	7,500	7,500	100	
3	2011	8,850	8,000	110.6	
4	2012	10,240	8,855	115.6	
5	2013	10,620	9,912	107.1	
6	2014	11,611	11,352	102.3	
7	2015	13,082	11,973	109.3	
8					
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GDP Deflator

Question 1.

If Real GDP=600 and nominal GDP=660,find GDP deflator (price index).

Solution: GDP deflator (Price index)=Nominal GDP/Real GDP×100

=660/600×100=110

It shows increase in the general price level by 10%.

Question 2.

If Real GDP=4700 and nominal GDP=3000,find GDP deflator (price index).

Solution: GDP deflator (Price index)=Nominal GDP/Real GDP×100

=3000/4700×100=63.83

The price level has fallen since GDP deflator is less than 100. Price decreases by (100 – 63.83) = 36.17%

VALUE OF OUTPUT

It is the market value of all the goods & services produced during an accounting year.

Value of output = Quantity of output (Q) x Price (P)

It can also be expressed as the sum of sales & change in stock because output is either sold or remained as unsold stock.

Value of output = sales + change in stock (Closing Stock – Opening Stock)

VALUE ADDED

It refers to the addition of value of the raw material or intermediate goods by a firm by its productive activities.

Value added = value of output- Intermediate consumption

INTERMEDIATE CONSUMPTION: - It refers to the expenditure incurred on secondary inputs like raw material, power, fuel etc. by producing units.

Gross Value Added (GVA_{MP})/GDP_{MP} = ∑Value Added of individual firms or production units

Gross (G)	Market Price (MP)	Domestic (D)
(-) Depreciation **Or** Consumption of fixed capital ↓	(-) Net Indirect Taxes (indirect taxes - subsidies) ↓	(+) NFIFA ↓
Net (N)	**Factor Cost (FC)**	**National (N)**

Different Concepts of National Income

III. NDP_{MP} (Net Domestic Product at market price)

NDP indicates the net availability of final products as it excludes depreciation i.e. the loss of products caused by depreciation of fixed capital. NDP_{MP} gives true picture of the net flow of goods and services of a domestic economy.

$$\mathbf{NDP_{MP} = GDP_{MP} - Depreciation}$$

IV. NNP_{MP} (Net National Product at market price)

It is the measure of the net contribution of residents of a country to production both inside and outside the domestic territory of the country.

$$\mathbf{NNP_{MP} = GNP_{MP} - Depreciation}$$

$$\mathbf{NNP_{MP} = NDP_{MP} + NFIA}$$

Different Concepts of National Income

V. GDP_{FC} (Gross Domestic Product at factor cost)

It is the sum total of factor incomes (rent, wages, interest and profit) generated within the domestic territory of a country and consumption of fixed capital during an accounting year.

It should be noted that out of what buyers pay, the production units have to make payments of indirect taxes. Sometimes production units also receive subsidies from the government. Therefore, what production units actually receive is not the **'market price'** but market price – indirect taxes + subsidies.

$$\mathbf{GDP_{FC} = GDP_{MP} - Indirect\ Taxes + Subsidies}$$

Or

$$\mathbf{GDP_{FC} = GDP_{MP} - Net\ Indirect\ Taxes}$$

Different Concepts of National Income

VI. NDP_{FC} (Net Domestic Product at factor cost) or Domestic Income

As we know that production is the combined result of the efforts of all the factors of production i.e. land, labour, capital and entrepreneurship. So, the producers pay them rewards in the form of rent, wages, interest and profit. NDP_{FC}, thus be defined as the total factor incomes earned by the factors of production while working within the domestic territory of a country in an accounting year.

NDP_{FC} = GDP_{MP} – Depreciation - Net Indirect Taxes

Or

NDP_{FC} = Rent + Wages + Interest + Profit

Different Concepts of National Income

VII. GNP_{FC} (Gross National Product at factor cost)

It is national concept as it includes NFIA. Further, GNP_{FC} excludes net indirect taxes (NIT) which are not paid to any factor of production in the process of production.

$GNP_{FC} = GNP_{MP} – NIT$

Or

$GNP_{FC} = GDP_{FC} + NFIA$

Or

$GNP_{FC} = GDP_{MP} + NFIA - NIT$

Different Concepts of National Income

VIII. NNP_{FC} (Net National Product at factor cost) or National Income

It is defined as the sum total of factor income generated within the domestic territory of a country and NFIA during a year. It is aggregate income earned by the normal residents of the country.

It is important to note here two things. First, NNP_{FC} is the same as National Income. Second, if instead of NFIA, 'net factor income to abroad' is given then for arriving at a national aggregate, it must be deducting from domestic aggregate.

$NNP_{FC} = NNP_{MP} – NIT$

Or

$NNP_{FC} = NDP_{FC} + NFIA$

Or

$NNP_{FC} = GDP_{MP} + NFIA – NIT – Depreciation$

Different Concepts of National Income

Per Capita Income (PCI)

Per capita income is a measure of the amount of money earned per person in a nation or geographic region. Per capita income is used to determine the average per-person income for an area and to evaluate the standard of living and quality of life of the population. Per capita income for a nation is calculated by dividing the country's national income by its population.

- **Private Income.**
- **Personal income.**
- **Personal disposable Income.**

Different Concepts of National Income

1. PRIVATE INCOME

It is the total of factor incomes and transfer incomes received from all sources by private sector within and outside the country.

Private Income = Income from domestic product accruing by Private sector + NFIA +All transfer income including Interest on National Debt.

Three main forms of transfer Income:-

1. Current transfer for government.
2. Net current transfer from rest of the world.
3. Interest on National debt.

Different Concepts of National Income

2. PERSONAL INCOME

It is the sum of earned income and transfer income received by persons or households from all sources within & outside country.

Personal Income = Private income - Corporate tax – Undistributed profit.

3. PERSONAL DISPOSABLE INCOME

It is that part of personal income which is available to household for disposal as they like.

Personal disposable income = Personal income - direct personal taxes – Miscellaneous government receipt (penalty, chalan, fee etc.)

Different Concepts of National Income

NATIONAL DISPOSABLE INCOME

It is defined as Net National Production at market price (NNP mp) plus current transfer from rest of the world. It is the total income in the hands of a nation that can be spent freely. Therefore, just like personal disposable income, it includes both factor and transfer incomes of a country.

National Disposable Income (NDI) = NNPmp + current transfer from rest of the world.

NDI = National Income (NNP_{fc}) + NIT +Current transfer from rest of the world.

THANK YOU