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XII Economics
Chapter-4 National Income Notes

Domestic Income implies the income accrued to both residents and non-residents within the geographical boundaries of the country.
National Income is described as the income accrued to the ordinary residents of the country, irrespective of their geographical location (i.e. within and outside the country).

BASISFOR COMPARISON	DOMESTIC INCOME	NATIONAL INCOME
Meaning	Domestic Income implies the income accrued to both residents and non-residents within the geographical boundaries of the country.	National Income is described as the income accrued to the ordinary residents of the country, irrespective of their geographical location (i.e. within and outside the country).
Does not matters	Who has generated the income?	Where the income is generated?
Represented as	National Domestic Product at Factor Cost (NDP_{FC})	Net National Product at Factor Cost (NNP_{FC})
Concept	Territorial Concept	National Concept
NFIA	Not a part of Domestic Income	Part of Domestic Income

Methods to calculate National Income:
1. Value Added Method
2. Income Method
3. Expenditure Method

Value Added Method Example
Suppose a baker requires only flour to produce goods. He purchases flour from the miller as an intermediate good worth Rs.30 and using its producing activities convert the flour into bread and sell the bread for Rs. 50.

Example:
Flour is an intermediate good and its value is Rs.30 and is known as the value of intermediate consumption.
Bread sold to the baker is output and intermediate consumption is known as value-added. It implies that the baker has added a value of Rs. 200 to the flow of final goods and services in the economy.
As we have discussed above, the difference between the value of output and the value of intermediate goods is termed as a value-added method. It implies that the baker has added a value of Rs. 20 to the total flow of final goods and services in the economy.

What does Intermediate Consumption mean?
The use of intermediate goods in the production process is termed intermediate consumption and expenditure on them is known as intermediate consumption expenditure. In the example given above, flour is an intermediate good for the baker.

Flour is considered an intermediate good because its value is merged with the value of bread. However, any machinery purchased for baking bread is not considered as an intermediate consumption because its value will not be included in the value of intermediate consumption.

What does Value of Output mean?
Value of output refers to the market value of all goods and services produced during one year.

Precaution of Value Added Method

Following are the precautions to be considered in the value-added method:

- Intermediate goods must not be added to the National Income as these are already added to the value of final goods. If included again, it will result in double counting.
- Dealings (sale and purchase) of second-hand goods should not be included in this calculation. These goods are already included in the financial year in which they were produced, and they are not added to the current flow of goods and services. However, any brokerage fee or commission paid on any sale or purchase of such products are to be included in this calculation as it is a productive service.
- Self-consumption services, i.e. domestic services like services of a housewife are not to be included in the national income calculation as it is challenging to figure out the market value of such work. These are produced and consumed within a household, and they do not enter the market. Therefore, these are regarded as non-market transactions. However, paid services like maids, drivers, etc. should be mentioned.

On the other hand, self-consumption goods should be counted in national income calculations because they contribute to the output of a financial year. However, their value is to be estimated as these products are never sold in the open market.

- The estimated value of houses owned by individuals should be included. The reason is, owners who live in their own homes are enjoying similar housing services like people who live in rented places. Hence, the value of such services is estimated as per the market rate. This estimation is known as imputed rent.

Any changes in the inventory must be included in this calculation. Net increase in inventory stocks is involved in national income calculation as a part of capital formation.

Problems of Double Counting
While calculating national income, only the value of final goods and services is to be added. The problem of double counting occurs when the value of intermediate goods is also included with the value of final goods.

Double counting refers to the situation where the value of a product or expenditure is counted more than once. A commodity passes through the different stages of production before reaching the final stage. When the value of a commodity is calculated at each stage of production, it is likely to include the cost of input more than once. This situation leads to double counting.

Let us understand with an example:
Suppose, a farmer produces 70 kg of wheat and sells it to the miller (flour mill) for Rs 700 to miller (flour mill). For farmers, wheat of Rs 700 is a final product. (If the intermediate cost for a farmer is zero, then his total value-added will be Rs 700).

For a miller (flour mill), wheat is considered as his intermediate good. Miller converts wheat into flour and sells it for Rs 900 to a baker. Now, flour of Rs 900 is a final product for the Miller. (Value added by miller = 900 – 700 = Rs 200)

For the baker, flour is considered as her intermediate good. Baker manufactures bread from flour and sells the entire bread to final consumers for Rs 1.100. Bread of Rs 1,100 is a final product for the baker. (Value added by baker = 11,00 – 900 = Rs 200)

In the given example, wheat is a final product for farmers, flour is the final product for the miller and bread is the final product for the baker. As a general rule, every producer treats his commodity as the final output. It means: Total value of output = 700 + 900 + 1,100 = Rs 2700. However, we can see in the given example that each transaction contains the value of intermediate goods.

Here, the value of wheat is included in the value of flour and the value of flour is included in the value of bread. As a result, the values of wheat and flour are counted more than once. This causes a double-counting issue as it leads to an overestimation of the value of goods and services produced. To calculate the value of national income precisely, we must avoid this problem of double counting.

Income Method:

Income method calculates national income based on the flow of factor revenues. There are four factors associated with every production activity; these are land, labor, capital, and entrepreneurship. Laborers receive their wages, the land gets rent, capital accrues interest, and entrepreneurship gets profit, each earning through the individual means.

Apart from that, self-employed individuals like doctors, CAs, advocates, etc. employ their own capital and labor. Thus, their income is regarded as mixed income.

Therefore, in the income method, the national income is measured in terms of these factor payments. Thus, it is also known as the 'factor payment method.'

To arrive at national income using this method, you must sum up all the individual income that occurred in a country within a specific period. It includes wages and salaries, rent of land, interest gained on capital and income of self-employed individuals. This method conclusively indicates the distribution of national income among every income group of a country.

Income Method Formula

National Income (NNP at FC) = Net Domestic Product at Factor Cost (NDPFC) + Net Factor

Income from Abroad

Here NDPFC = Compensation of Employees + Operating Surplus + Mixed-Income

Here Operating Surplus = Rent + Interest + Profit

Steps of Income Method Formula:

Identification and Classification of Production Units

The first step in calculating national income by income method is to identify and segregate the units of production. They are classified into three categories, primary, secondary, and tertiary.

Classify and Estimate the Factor Income

The next step of the income method of national income is to classify factor payments in different categories like wages, rent, interest, profit, and mixed income. Otherwise, they can be classified into compensation to employees, operating surplus, and mixed income.

After classifying, estimate the number of such payments made by enterprises.

Calculating Domestic Income

Summing up all factor incomes of every sector will present the domestic income figure (NDPFC).

NDPFC = Compensation of Employees + Operating Surplus + Mixed-Income

Estimate NFIA to arrive at National Income

The last step to reach the final National Income figure is to estimate Net Factor Income from Abroad (NFIA) with NDPFC.

National Income (NNPFC) = Net Domestic Product at Factor Cost (NDPFC) + Net Factor Income from Abroad (NFIA)

Components of Factor Income
Factor income is an essential part of the income method. Summing up all the factor incomes within a country for a period resulted in Domestic Income or NDPFC. There are three components of factor income compensation to employees, operating surplus, and mixed income.

Compensation to Employees (COE)
Compensation to employees refers to the remuneration paid by an employer to his/her employees for their productive services. It includes all monetary and non-monetary benefits that employees receive, directly or indirectly. Moreover, COE comprises of 3 elements, these are –
Wages in Cash
It consists of every monetary benefit, such as wages, bonuses, commissions, dearness allowance, etc. However, business expenditures incurred by employees or any reimbursements will not be calculated under COE. Such expense is reconsidered as intermediate consumption of an enterprise.
Wages in Kind
This includes every non-monetary benefit that employees receive from their employers, like home, car, medical and educational facilities. The imputed value of such benefits should be included in national income.
However, facilities which are necessary for work and employees have no discretion in it should not be included here. For instance, uniforms that employees use, or vehicles used for business purposes, etc. Such facilities are considered as intermediate consumption.
Employer's Contribution to Social Security Schemes
It includes the contribution employers make in social security plans such as employees provident fund, gratuity, pension plans, etc.
Operating Surplus
Operating surplus is also divided into 3 categories, these are –
Rent
Rent arises from the ownership of properties. Income under this head comprises both actual rent and imputed rent. Actual rent is calculated on properties to let out on rent. Whereas imputed rent is rent on self-occupied properties—such rent calculated according to the market value of the property.
Interest
It refers to the interest amount received for loaning funds to a manufacturing unit. This interest comprises both actual and imputed interest. Additionally, it also includes interest paid on loans taken for production units.
However, it does not include interest paid by the government against public debt as well as interest on consumer loans. Moreover, interest paid by one company to another is also not included as it is already accounted for in the company books as profit.
Profit
An entrepreneur earns profits for his/her contribution to the company. It is a residual income, which the entrepreneur earns after paying other factors of production.

Mixed-Income
Self-employed individuals and unincorporated businesses generate this form of income. The mixed income arises when elements of factor incomes cannot be separated from each other. For example, a doctor running his/her clinic.

Precautions
The following measures must be taken to calculate national income correctly using the income method:
- Only factor revenues received from rendering productive services are considered. All forms of transfer income, such as old-age pensions, unemployment benefits, and so on, are excluded.
- Second-hand products are excluded since they are not part of the current year's production, but commission paid on second-hand goods is included because it is compensation for providing productive services. Similarly, the proceeds from the selling of stocks and bonds are excluded.
- Direct taxes are to be mentioned, such as income tax paid by employees from their salaries and corporate tax paid by a joint-stock firm from its profits. Wealth and gift taxes, on the other hand, are not

included because they are paid from previous savings and wealth. Indirect taxes, such as sales tax and excise duties, which tend to raise market prices, are also excluded.

- Smuggling, black-marketing, and other unlawful operations, as well as windfall income (e.g., from lotteries), are not included.

- Imputed rent for owner-occupied houses and the value of production for self-consumption is included, but not the value of self-consumed services such as those provided by housewives.

Expenditure Method:

The Expenditure method is a system used for determining the Gross Domestic Product (GDP) of a country. This method considers consumption, investments, net export, and government Expenditure to calculate a nation's annual GDP.

Expenditure method of National Income can be considered as the most common way to calculate GDP as it includes both public and private sector expenses incurred within a nation's borders. However, this system can only be used to calculate nominal GDP, which is not adjusted for inflation.

This method is also often referred to as the 'Income Disposal Method'.

How is GDP Determined?
The process of calculating GDP with the Expenditure process is similar to that of determining demand as the total spending of an economy is considered as aggregate demand. For which reason, both Expenditure and aggregate demand shifts in tandem with each other.

However, aggregate demand usually considers the average price of all goods and services produced and utilized in an economy. That makes it similar to GDP only in the long run, after adjusting for inflation.

Expenditure Formula
There are primarily four different types of aggregated expenses that are utilized to determine GDP. These are –
Investments made by businesses.
Government expenses on goods and services.
Household consumption.
Net export (total exports minus the value of imported goods and services).

The Expenditure Method Formula is as Following –
GDP=C+I+G+(X–M)GDP=C+I+G+(X–M)
Here, C is consumer spending on different goods and services, I represents investments made by businesses, and on capital goods, G represents government's spending on goods and services provided to the public, X is exports, and M is imports.

Primary Components Used in Expenditure Method of Calculating National Income
The above mentioned types of aggregated expenses can be further broken down depending on the parameters these include. Let's take a look –
Consumer Spending – Consumer spending usually accounts for a large part of a nation's GDP. It can be divided into two categories – purchases of durable and non-durable goods, and procurement of services.
Consumer spending includes expenses incurred by individuals residing within the domestic territory, or abroad. For example, expenses made during one's foreign travel will also be added to consumer spending.
However, it does not include any expenses incurred by foreign visitors in India.
Government Expenditure – It represents expenses undertaken by both State and Central authorities for providing infrastructure, essential commodities, and other requirements to the general populace. Expenditure method of measuring National Income also includes expenses made towards education, healthcare, and defence industry.

Business Investment – Business investments include capital Expenditures on assets by different organizations. Business investment can be divided into two categories –

Gross Fixed Capital – It indicates expenses incurred during purchase of fixed assets. Gross fixed capital can be further categorised into two types.

Gross Business Fixed Investments – It includes expenses made towards long-term assets, such as machinery, real-estate, production facility, infrastructure, etc.

Gross Residential Construction Investments – Expenses incurred by businesses for purchasing or constructing residential units upon receiving tenders.

Inventory Investment – Investments made towards the acquisition of raw materials, semi-finished or finished goods are included in this category of Expenditure. These are considered as items that cannot be utilised for current consumption. Inventory investment is determined by calculating the closing stock balance and opening stock balance at the end of each year.

Net Exports – The difference in valuation between the exports and imports undertaken by a country within one financial year is considered as net exports. Exports are considered an output of an economy whereas imports are considered as Expenditures as they are not produced within a country's National boundaries. Instead of calculating these factors separately, the difference is considered as the net export.

Precautions Considered While Using Expenditure Method of National Income

Students should keep in mind several factors while using the Expenditure method of calculating National Income. These include –

1. Any expenses on account of intermediate goods cannot be considered to determine a nation's Income as these expenses are already included in the value of final goods produced. Otherwise, it will lead to double-counting of a single Expenditure, thus inflating National Income inaccurately.

2. Any transfer payment should not be included under the Expenditure formula as these payments do not add any value to a nation's economy.

3.Purchase of any second-hand goods is not included in the total Expenditure method as these do not affect the total value of goods and services produced. However, any brokerage paid on the purchase of such goods or services has to be included in the calculation.

4. Procurement of assets such as shares, bonds, debentures, etc. is also not included in the calculation as these represent changes in ownership instead of changes in goods and services' values. Contrarily, any brokerage earned on the trading of shares will be considered as a productive service.

5. Any expenses incurred due to producing goods for self-consumption, services provided by the government and non-profit institutions (that serve households) are also included in the National Income. Moreover, imputed values of occupied residential units are also considered as a productive service; hence those are considered in the National Income.

Treatments of Different Items in National Income

Following Items are Excluded While Calculating National Income:
Transfer Income and payments like Scholarships, Pensions etc.
Sale and purchase of financial assets.
Non-market trades, such as kitchen gardening, etc.
Compulsory Transfer Payments like capital gain tax, interest tax, etc.
Second-hand commodities, such as the sale or purchase of an old house, etc.
Windfall gains like lotteries, gambling, etc.
Interest on the national debt, as well as interest paid by households to commercial banks.

A capital loss like the destruction of a building by flood or earthquake etc.
Capital gains like Profits from a rise in the value of land, buildings, or stocks, etc.
Intermediate consumption expenditure like vegetables purchased by a dairy shop, the purchase of raw material by a firm, etc

The Below Items are Included While Calculating National Income:
Owners of production units supply services such as imputed rent of the owner's inhabited residence and interest on own capital, etc.
Employer contributions to a provident fund and bonus etc.
Wages obtained by Indian employees working overseas, profit earned by an Indian organization through its foreign branches, etc.
Brokerage/Commission on sale/purchase of second- hand goods.
Capital Formation includes things like a company buying machinery, building a flyover, and building bridges, etc.
Payment of bus fare by households, payment of phone bills, examination fees for students, etc.
Government-provided services such as dispensary, education and government expenditure on street lighting.
Interest on the loan paid by commercial banks

GDP Deflator

GDP meaning is that it is a comprehensive parameter that depicts the economic health of a country for a given period. It is helpful in estimating the growth rate of a country and their size of the economy. Hence, it acts as a tool that guides businesses in various decision-making procedures.
GDP of a country for a specific period is calculated using the following equation
Gross Domestic Product = C + I + G + (X – M)
Where,
C = Private consumption
I = Gross investment
G = Sum of government investment and government spending
X = Exports
M = Imports
Further, the calculation of GDP can be done in three ways, using production, expenditures, or income. The concept can be further studied by reading about nominal and real GDP.

Nominal GDP
Nominal Gross Domestic Product or nominal GDP is the Value of GDP calculated as per the current market prices. So, nominal meaning it will contain all the changes in market prices owing to inflation and depletion for the current year. So, it represents the current market value of goods and commodities produced in a specific time.

Real GDP
Unlike the nominal GDP of India, real GDP is an inflation-adjusted calculation of GDP. It is the estimate of the total value of all goods and commodities produced in a year which are accounted for by inflation.

To calculate this, one needs to consider the prices of a selected base year. One needs to first calculate the change in GDP because of inflation and divide out the inflation for every year. Therefore, it is concluded that even if the change in prices doesn't lead to a change in output, then the nominal GDP would show change.

The total value of all the final goods and services that are produced by an economy during a given year that accounts for inflation is known as real GDP. It is calculated using the prices of a selected base year. Real GDP, accounts for the fact that if prices change but the output doesn’t, nominal GDP would change.

Difference between Nominal and Real GDP.

Parameters	**Nominal GDP**	**Real GDP**
Meaning	The aggregate financial business value manufactured within a country is known as nominal GDP.	The measure of GDP was modified according to the changes in the general price level.
What is it?	Inflation without GDP	Inflation-adjusted GDP
Communicated in	Present year prices	Beginning year prices or regular prices
Worth	High	Low
Uses	Compares different quarters of a particular year	Compares two or more financial years
Financial growth	Analysing is not easy	Measures economic growth in an excellent manner

In an ideal scenario wherein there won't be any inflation/ deflation in a given period, the value of nominal GDP and real GDP will remain the same. Besides, it is easier to analyze or measure the real GDP than that of nominal GDP.

Further, this price inflation observed in an economy can be determined by a term known as GDP deflator. Here's how it can be calculated.

GDPdeflator= (NominalGDP / RealGDP)$*100$
It acts as a price index for customers and measures inflation or deflation in price in a given year. The study of such economic concepts is crucial for students as they give them in-depth ideas about the economical concepts relating to growth and development in the country. To learn more about the concepts, students can browse through Vedantu's website and check the vast quantities of study materials present.
Unregistered or nominal GDP refers to the market value of all final goods that are produced in a geographical region.

If the output does not change but price changes from one period to the next then the nominal GDP would change, irrespective of the change in output.
Real GDP accounts for changes in prices due to inflation.
Real GDP is actually nominal GDP that is just adjusted for inflation.
Real GDP would remain the same if prices change from one period to the next irrespective of the change in output.
Change in real production is reflected by real GDP and nominal GDP will remain the same as real GDP if there is no inflation or deflation.

Equation
GDP is calculated by the formula:
GDP= C+G+I+NX
where
C=consumption;

G=government spending;
I=investment; and
NX=net exports

True False

Q1. Real GDP per capita is always smaller than real GDP.
Ans. True
Q2. Nominal GDP is always larger than real GDP.
Ans. False
Q3. An increase in the nominal GDP of a country reflects that the country is producing more goods and services.
Ans. False
Q4. Consumption, net exports, investment are all components of domestic products.
Ans. True
Q5. Real GDP is inflation-adjusted GDP.
Ans. True
Q6. Real GDP or Real Gross Domestic Product is the measure of or the total value of productions made in a specific period in a country.
Ans. True