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NATIONAL INCOME

AND

RELATED AGGREGATE

PART 3rd

3. MEASUREMENT

OF

NATIONAL INCOME

METHODS OF MEASUREMENT OF NI

Production, income and expenditure when we measure gives us three methods of measuring national income: Product method, income method and expenditure method.

1. Product method or Value Added method: measure the value of goods and services produced. This enables us to understand the performance of an economy in terms of the targets set.

2. Income method: measure the flow of factor income generated during the production process. This enables us to understand the contribution made by different factors of production in the economy.

3. Expenditure method: measure the flow of expenditure on goods and services. This enables us to understand the consumption, savings and investment behaviour of the economy.

PROBLEM OF DOUBLE COUNTING

Counting the value of a commodity more than once in the measurement of national income is called double counting.

VALUE ADDED METHOD

In this we have to understand the difference between the two concepts: Value of Output and Value Added.

VALUE OF OUTPUT

Value of output is the market value of all goods and services produced by the firm in an accounting year

(a) Value of Output = Physical Output X Price.

This value of output includes two things:

(i) The value of intermediate goods which were purchased by this enterprises from other firms, and

(ii) The value of the contributions made by this firm through its production process or value added by the enterprise.

(b) Value of Output = Sales + Change in stock of inventories

Sales= Domestic Sales + Export

Change in Stock of inventories = Closing stock at the end of the accounting year - Opening stock at the beginning of the accounting year.

VALUE ADDED (Or GROSS VALUE ADDED)

Value added can be defined as the difference between value of output of a firm in an accounting year and value of inputs brought from other firms (or value of intermediate consumption).

Gross Value Added by a firm = Value of gross output of the firm - Intermediate consumption (or input purchased from other firms) by the firm. Or

Value Added by a firm = Value of production of the firm - Value of intermediate goods used by the firm.

ESTIMATION OF NI AGGREGATES THROUGH VALUE ADDED METHOD

Various National income aggregates measured by value added method are:

(i) GDP_{MP} = Sum of the gross values added by all the firms in the domestic territory of the country or

GDP_{MP} = Sales + Change in stock or inventories (Closing stock - Opening stock) - Intermediate consumption (or purchase from other firms) + Export - Imports

(ii) NDP_{MP} = GDP_{MP} - Consumption of fixed capital (or depreciation) or Sum of net value added by all the firms in the domestic territory of the country

(NOTE Depreciation = Gross capital formation - Net capital formation)

(iii) NDP_{FC} = NDP_{MP} - Net Indirect Taxes

(iv) NNP_{FC} = NDP_{FC} + Net Factor income from abroad.

In order to estimate domestic product through value added method, we classify the producer enterprises into three main sectors. Primary sector, secondary sector and tertiary sector. The sum of value added by all the sectors in the domestic territory of the country gives us the Domestic Product. Hence,

GDP_{MP} = Gross value added by Primary sector + Gross value added by secondary sector + Gross value added by the Tertiary sector. Or

GDP_{MP} = Value of Gross output of the primary sector - Intermediate consumption of the primary sector + Value of Gross output of the secondary sector - Intermediate consumption of the secondary sector

+ Value of gross output of the tertiary sector - Intermediate consumption of the tertiary sector.

PRECAUTIONS OF VALUE ADDED METHOD

1. Net increase in stock of inventories should be included.

2. Value of production for self -consumption should be included in the estimation of national income

3. Own account production of fixed asset by all the producer enterprises should be included.

4. A values of services provided by the housewives in the households are not included.

5. Sales and purchases of second-hand goods are not included.

6. Brokerage or commission earned by the dealers of second-hand goods should be included.

7. Value of intermediate goods should not be included in the measurement of national income .

INCOME METHOD

According to income method, national income is estimated by adding income earned by all the factors of production for their factor - services during a year. We are aware that the contribution made by producing enterprises to the current flow of goods and services in the economy is termed as net asset value added at factor cost.Thus, net value added and factor income are one and the same thing. Thus, according to income method, domestic factor income or NDP_{FC} is the sum total of payments received by all the factors of production for their factor- services in the domestic territory of a country during a year.

COMPONENTS OF DOMESTIC FACTOR INCOME

The income generated by all the producer enterprises within the domestic country is called domestic factor income. Main components of domestic factor income are:

1. Compensation to employees or Income from work: -

Compensation to employees has been defined as payments made by producers to their employees in return for work in the form of cash, kind, and social security benefits. It includes

(a) Wages and Salaries in cash: - It includes basic pay, dearness allowance, bonus, honorarium, gratuities, etc.

(b) Compensation in Kind: - It includes, rent free accommodation, free travelling arrangements, free or subsidised ration, uniforms, etc.

(c) Employers' contributions to social security schemes. It includes employers' share towards employees' insurance, life insurance, retirement pension, provident fund, etc.

2. Operating Surplus: - **Income from property and entrepreneurship in the form of rent, interest and profit is termed as operating surplus. The concept of operating surplus is applicable only on corporate and quasi corporate sector enterprises (both private and government) but it is not applicable on general government sector. The operating surplus has two main components:-**

3. Mixed Income of the self-employed: - **Incomes of the self-employed persons like doctors, lawyers, chartered accountant, shopkeepers, farmers etc. are known as self-employed income. A self - employed person provides his labour as well as his property in his work, it becomes very difficult to segregate wage income and non-wage income from his total earnings. Thus, his total earnings are the mixture of income from work and the income households.**

Thus, components of factor income are: (i) Compensation of employees (or wages and salaries in cash and kind including social security contributions by employers), (ii) Rent, (iii) Interest. (iv) Profit and (v) Mixed Income.

Hence, according to income method,

(i) Domestic Factor Income = NDP_{FC} (Net Domestic Product at factor cost)

(ii) NDP_{FC} = Compensation to employees+ Operating surplus + Mixed income of the self-employed Or Wages and Salaries (in cash and kind) + Rent + Interest + Profit + Mixed Income Or

(iii) GDP_{FC} = NDP_{FC} + Depreciation = Wages + Rent + Interest + Profit + Mixed income + Depreciation.

(iv) NNP_{FC} = Compensation to employees + Operating surplus + Mixed income of the self-employed + Net factor income from abroad. Or

= Wages and salaries + Rent + Profit + Interest + Mixed income + Net factor income from abroad.

FACTOR INCOME AND TRANSFER PAYMENT

(i) Factor Income: -

Factor income is the payments to the factor of production in lieu of factor services rendered by them in the process of production. The components of factor income are: (a) Compensation for employees, (b) Rent, (c) Interest, (d) Profit, (e) Mixed income of self-employed.

(ii) Transfer Payments: -

The payment which are made to the households, enterprises and non-profit institution without rendering any productive service are called transfer payments. That is why they are called unilateral payment. For example, old age pension, unemployment allowances, scholarship to the students, government subsidies, donations, etc. are all transfer payment.

PRECAUTION OF INCOME METHOD

1.Transfer payments are not included in factor income.

2. Imputed value of factor services provided by the owners for production should be included.

3. Lottery income should not be included as they do not contribute to the current flow of goods and services.

4. Capital Gain should be avoided in the estimation of national income.

5. Income from self-consumed output should be included in the estimation of national income.

EXPENDITURE METHOD

This is termed as final expenditure method also. According to expenditure method, the gross domestic product (GDP) is the sum total of all the final goods and services, within the domestic territory of a country, during a year.

ITEM OR COMPONENTS OF FINAL EXPENDITURE

In the estimation of final expenditure, we include households' expenditure and government's expenditure. The main components of final expenditure are as follow.

<u>1. Private Final Consumption Expenditure (PFCE) or (C):-</u>

Private final consumption expenditure is the money value of goods and services purchased by households and non- profit institutions for current use during the year.

<u>2 Final Investment Expenditure (I) or Gross Domestic Capital Formation (GDCE): -</u> Investment means addition to the real capital stock during a year. Investment expenditure is incurred on the purchase of capital goods. It is also termed as gross domestic capital formation. There are four major categories of investment:

(a) Fixed business investment (b) Inventory investment (c) Residential construction investment (d) Public investment

GDCF = Net domestic fixed capital formation + Closing stock- Opening stock + Consumption of fixed capital

<u>3. Government Final Consumption Expenditure (GFCE or G): -</u>

It refers to the government expenditure on goods and services.

<u>4. Net Export (X-M):-</u>Net export is the difference between value of exports and imports of goods and services. When we deduct Imports from Exports. It is gives Net Export. It is treated as Net Foreign Investment in national income accounting. Thus,

Net Export = Exports - Imports.

Thus, according to expenditure method

(i) GDP_{MP} = PFCE + GDCF + GFCE + (X - M) Or

GDP_{MP} = C +I+G+ (X- M)

Here, GDP_{MP} Gross Domestic Product at market price.

C = Private Final Consumption Expenditure.

I = Investment Expenditure or Gross Domestic Capital Formation

G = Government Final Consumption Expenditure

X- M= Net Export

(ii) GNP_{MP} = GDP_{MP} + Net Factor Income from Abroad.

PRECAUTION OF EXPENDITURE METHOD

(i) Expenditure on second-hand goods should not be included.

(ii) Expenditure on purchase on bonds and shares should not be included.

(iii) All Government expenditure on transfer payments, should not be included.

(iv) Expenditure on all intermediate goods and services should not be included.

(v) Imputed value of factor services by the owner for self-use should be included.

GDP AND WELFARE

We know that GDP measures the value of goods and services produced in a domestic territory of a country in a particular year. Due to some serious limitations GDP fails to serve as an adequate index of welfare. The major limitations or deficiencies are as follows:

1. How uniform is the distribution of GDP? It is possible that a rise in GDP may not contribute to the wellbeing of the people of the country if it is not distributed equally. If, with the increase in GDP and per capita GDP, the rich are getting richer and the poor getting poorer, then this growth of GDP cannot be said to promote welfare. Rather it may lower down the welfare of the people.

2. Non- Market Transactions (Non-Monetary Exchanges): Economic activities that are not marketed and are not evaluated in monetary terms are called non-market transactions or non-monetary exchanges. These non-monetary exchanges are not included in the estimation of GDP.

3. Externalities: Externalities refers to harmful effects (or beneficial effect) that the production enterprises have on the members of the society for which they are not penalised (or paid).

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