# 11
# NATIONAL INCOME : CONCEPTS

## 11.1 INTRODUCTION

In the previous lesson you have learnt about the meaning of income, different types of income and how this income is generated. You have also learnt about the different types of flows between different sectors. In this lesson, you will learn the meaning of 'national' in the context of national income. You will also learn about various other concepts relating to national income. All these concepts are very important economic concepts and without knowing these concepts it is very difficult to understand the meaning and ways of measuring national income.

## 11.2 OBJECTIVES

After going through this lesson, you will be able to :

- explain the concepts of economic (domestic) territory and residents;
- distinguish between residents and non-residents;
- distinguish between intermediate products and final products;
- explain the concepts of value of output and value added;
- distinguish between gross and net measures of value added;
- distinguish between market price and factor cost measures of value added;
- explain the different types of factor incomes;
- derive the concept of domestic product and national product;
- explain the concept of final expenditure;
- state the different types of final expenditure in an economy;

## 11.3 MEANING OF 'NATIONAL'

To understand the meaning of the word 'national' in the context of national income, we must first understand the meaning of (a) Economic (Domestic) Territory and (b) Residents.

### (a) Economic (Domestic) Territory

You may be familiar with the meaning of geographical territory of a country. The concept of economic territory (or domestic territory) is derived from geographical territory by making certain adjustments. This concept is evolved in connection with the measurement of economic activity of a country.

Two adjustments are made in geographical territory to derive economic territory. These are:

(i) Include all embassies and similar government offices of a country located outside its geographical territory. For example, India's economic territory will include all Indian embassies and similar offices located in foreign countries.

(ii) Exclude all foreign embassies, offices of international organisations and other similar offices located within the geographical territory of a country. For example, India's economic territory will exclude all foreign embassies and offices of international organisations located in India.

It is clear from the above that the concept of economic territory is not the same as geographical territory. The concept of economic territory is relevant for estimating domestic product of a country.

Sum of all incomes originating within economic territory of a country is called domestic income of that country. All factor incomes generated in production units located in the economic territory, whether owned by the residents or the foreigners, are included in domestic income.

### (b) Residents

You may be knowing the meaning of the word citizen. The term resident is different from the term citizen.

All individual and institutions whose centre of economic interest lies in a country are treated as the residents of that country irrespective of whether they are the citizens of that country or not. For example, if a foreign citizen normally resides in India and performs the basic economic activities of production, consumption and investment in India, he is treated as Indian resident. Similarly an Indian citizen living abroad and performing his basic economic activities in that country will be treated as the resident of the country in which he lives.

You must be aware of a large number of Indian citizens living abroad and performing their basic economic activities there. They will be treated as the resident of that country in which they live. For example, Indian citizens living in England, United States of America, Canada, etc. are termed as Non-resident Indians (NRIs) in India. Although they are the citizens of India but treated as non-residents of India and citizen of that country in which they live. Thus a citizen of a country may or may not be the resident of that country.

It is the concept of resident which is relevant for estimating national income of a country. The sum total of factor incomes accruing to the residents of the country, both from their activities within and outside the economic territory, is the national income of the country. So, the term 'national' in national income is associated with the concept of 'residents'. National income is strictly income of the residents.

## 11.4 INTERMEDIATE PRODUCTS VS. FINAL PRODUCTS

The concepts of intermediate and final products are very important economic concepts. Without understanding these concepts it is not possible to understand the process of estimation of national income. These are explained below:

### (a) Intermediate Products

The intermediate products are those which are purchased by one production unit from other production units for resale. For example, wheat purchased by a flour mill is intermediate product for the mill. The flour mill will grind the wheat and resale the same in the form of flour.

Similarly all other such purchases by the flour mill like electricity, packing materials, lubricants, etc. are intermediate products. Expenditure on all such purchases from other production units is a part of the value of output of flour. The cost incurred on such products is termed as 'intermediate cost'.

### (b) Final Products

All goods and services purchased for consumption and investment, and not for resale, are final products. It includes all purchases by households and the purchases of capital goods like machines, furnitures, fittings, transport vehicles, etc. by the production units. The final goods are purchased for own use for consumption or for investment.

### Significance of this distinction

The significance of the distinction between intermediate products and final products can be explained with the help of an example. Suppose, the flour mill buys wheat worth Rs. 10,000 from the farmers. After grinding the wheat the mill sells the flour for Rs. 12,000 to the households. Flour is the final product to the households. In our example the sale of output of wheat by the farmers is Rs. 10,000 while the sale of output of flour by the mill is Rs. 12,000. The total output of both the farmers and the mill is Rs. 22,000.

There is an element of double counting in the total output of Rs. 22,000. The output of wheat has been counted twice, once as a part of the output of the farmer and then as a part of the output of the flour mill.

This double counting can be avoided by counting the value of final products only and ignoring the value of intermediate products. It is because the value of intermediate products is already included in the value of final products.

## 11.5 CONCEPT OF VALUE ADDED

### (a) Meaning

To explain the concept of value added let us take the example given in the previous section 11.4 about the flour mill. The mill purchases wheat worth Rs. 10,000. This purchase is the intermediate cost to the mill. The sale of flour worth Rs. 12,000 is the output of the mill. Suppose wheat is the only intermediate cost to the mill.

Now, out of the total output of the mill of Rs. 12,000 the contribution of the mill is only worth Rs. 2,000. The remaining Rs. 10,000 is the contribution of the farmers. The contribution of Rs. 2,000 by the mill is called the 'value added' by the mill. It is estimated after deducting intermediate cost from the total value of output. Thus :

Value added = Value of output - intermediate cost
= Rs. 12000 - Rs. 10000 = Rs. 2000

The above measure of value added is termed as Gross Value Added at Market Price. (GVAmp) To know what 'gross' and 'market price' mean in GVAmp, we must know the difference between (a) gross and net measures and (b) market price and factor cost measures of value added.

### (b) Gross vs. Net measures

Production requires the use of fixed capital assets like machines, building etc. The life of an asset is limited. For example, a machine installed in a factory may run only for 10 years. After 10 years the machine has to be replaced by a new machine. It means that every year there is a certain amount of wear and tear of an asset used in production. Such normal wear and tear is called **consumption of fixed capital 'depreciation'**.

If we do not deduct the consumption of fixed capital from the value added the measure of value so obtained is 'gross value added'. If we deduct consumption of fixed capital from gross value added we get 'net value added'.

Thus:

Net Value Added = Gross Value Added - Consumption of fixed capital

### (c) Market Price vs. Factor Cost measures

The difference in these two measures is on account of 'indirect taxes' and 'subsidies'.

### (i) Indirect Taxes

The term 'market price' means the price which the buyers pay to the production units (sellers). The sellers pay a part of this market price as 'indirect taxes' to the government.

All taxes levied on production like sales tax, excise duties, octroi etc. are called 'indirect taxes'. These are called 'indirect' because these taxes are levied on the sellers but shifted on the buyers by the sellers. So these are indirectly paid by the buyers. These taxes are paid by the sellers to the goverment. It also means that the entire market price, that a seller gets, is not available for distribution as incomes among the factors of production.

### (ii) Subsidies

In contrast to indirect taxes, subsidies are the financial help given by the government to the production units for selling the products at lower prices. Such help is given in case of those selected commodities whose use the government wants to encourage. If there was no subsidy the consumer may not buy at all or buy less because of high price. Subsidies are the additional receipts, other than the market price, available to the production unit for distribution among the factors of production.

By subtracting indirect taxes from and adding subsidies to the net value added at market price we get value added at factor cost.

NVAfc = NVAmp - indirect taxes + subsidies.

### (d) Different measures of Value Added

The inter-relationship among different measures of value added is given below:

GVAmp = Value of output - intermediate cost

NVAmp = GVAmp - consumption of fixed capital

NVAfc = NVAmp - indirect taxes + subsidies.

## 11.6 CONCEPT OF DOMESTIC PRODUCT

A large number of production units are located in the economic territory (domestic territory) of a country. The sum total of value added by all such production units is termed as 'domestic product'.

Accordingly,

i) Sum total of Gross Value Added at market price of all production units = Gross Domestic Product at market price

ii) Sum total of Net Value Added at market price of all production units = Net Domestic Product at market price.

iii) Sum total of Net Value Added at factor cost of all production units = Net Domestic Product at factor cost.

The interrelationship among these aggregates is:

i) Gross Domestic Product at market price=Sum total of Gross Value Added by all production units

ii) Net Domestic Product at market price = Gross Domestic Product at market price - Depreciation

iii) Net Domestic Product at factor cost = Net Domestic Product at market price - indirect taxes + subsidies.

## 11.7 CONCEPT OF NATIONAL PRODUCT

Domestic Product is a measure of production activity of production units located in the economic territory of a country. Both residents and non-residents provide factor services to these units. As such the income generated in these units is shared by both the residents and non-residents. To get the contribution of only residents we have to deduct from domestic product, the factor payments made to the non-residents.

The residents, in addition to their services to the production units located in the economic territory of a country, also provide factor services to production units outside this economic territory i.e., to the rest of the world. In return for these services they get factor payments (factor income) from the rest of the world.

In brief, residents get factor payments, both from economic territory units and foreign territory units. The sum of both is termed as national product.It is found out in the following manner:

National Product = Domestic product - Factor income paid to the rest of the world + Factor income received from the rest of the world

or

National Product = Domestic product + Net factor income received from abroad.

Accordingly,

i) Gross Domestic Product at market price + Net factor income from abroad = Gross National Product at market price.

ii) Net Domestic Product at market price + Net factor income from abroad = Net National Product at market price.

iii) Net Domestic Product at Factor cost + Net factor income from abroad = Net National Product at factor cost.

It is Net National Product at factor cost which is called **National Income** of a country.

## POINTS TO REMEMBER

- The economic territory of a country is the geographical territory excluding foreign embassies, offices of international organisations etc. but including embassies and similar government offices of a country in the rest of the world.
- A resident is one whose centre of economic interest lies in the country in which he lives.
- The intermediate products are those which are purchased by the production units from other production units and are meant for resale
- All goods and services purchased for final consumption and investment are final products.
- Value added by a production unit is the excess of the value of output over intermediate cost.
- GVAmp = Value of output - intermediate cost.
- NVAmp = GVAmp - Consumption of fixed capital.
- NVAfc = NVAmp - indirect taxes + subsidies.
- Sum total of value added by all production units located in the economic territory of a country is called domestic product.
- By adding net factor income from abroad to domestic product we get net national product at factor cost. It is also called National Income.

## INTEXT QUESTIONS 11.1

Choose the correct alternative :

(i) The term 'national' in national income is associated with :

A. Economic territory
B. Geographical territory
C. Residents
D. Citizens

(ii) By deducting intermediate cost and indirect taxes from the value of output we get :

A. Gross value added at market price.
B. Gross value added at factor cost.
C. Net value added at market price.
D. Net value added at factor cost.

(iii) By deducting consumption of fixed capital and intermediate cost from the value of output we get :

A. Gross value added at market price.
B. Gross value added at factor cost.
C. Net value added at market price.
D. Net value added at factor cost.

(iv) Value added is a measure of the contribution of :

A. a resident.
B. a production unit.
C. an entrepreneur.
D. a worker.

(v) The expenditure on goods and services purchased for resale by a production unit is :

A. Intermediate cost.
B. Value of final products.
C. Value of output.
D. Factor cost.

(vi) National income of a country is same as:

A. Gross National Product at market price.
B. Net National Product at factor cost.
C. Gross National Product at factor cost.
D. Net National Product at market price.

## 11.8 CONCEPT OF FACTOR INCOME

The NVAfc is a measure of the contribution of a production unit to national income. A production unit is formed by the four factors of production viz. land, labour, capital and entrepreneurship. As such the NVAfc is distributed among the owners of the four factors of production. Such payments made by the production unit are called 'factor payments'. For the owners of the factors of production who receive such payments it is 'factor income'.

The owners of labour get their share in the form of wages, salaries, bonus and some other benefits collectively termed as the compensation of employees. The owners of land get rent. The owners of capital get interest and the entrepreneur gets profit. Thus, there are four types of factor incomes described below:

### (a) Compensation of employees

It includes all money receipts and benefits both in cash and in kind accruing to the employees. The employees get wages or salaries. In addition they may get many other benefits as employees like bonus, employer's contribution to provident fund, free accommodation, free conveyance, free medical facilities, free holiday trips, etc.

In short, compensation of employees includes all monetary and non-monetary benefits that accrue to the employees on account of work performed.

### (b) Rent

It accrues to the owners of land for the use of their land for production of goods and services.

### (c) Interest

Interest is a payment to those who provide funds to the production units. In national income estimation, the interest payments only against the funds provided to the production units for investment are treated as factor payments. Any interest payment against loans given to consumers to meet consumption expenditure is not a factor payment and so can not be treated as factor income.

### (d) Profit

Profit is the income accruing to the entrepreneur for his entrepreneurial services to the production units. It is a residual income left after factor payments out of the value added in the form of compensation of employees, rent and interest have been made.

### (e) Mixed Income

The data about the four types of factor incomes is obtained from the income accounts of the production units. Many production units do not keep accounts in a manner so that the four factor payments are clearly identified. This happens in case of those entrepreneurs who also provide their own land, labour and capital services to their production units.

Suppose there is a small shopkeeper who has no employees. Also suppose that he has not borrowed any funds and used his own savings for investment in the shop. Further suppose that he is also the owner of the land on which the shop is built. The payment for these services gets merged with profits and recorded as profit in the accounts. Such an income is not truely profit but includes owner's salary, rent and interest also. In national income estimation, it is treated as 'mixed income'.

The sum total of the compensation of employees, rent, interest and profit paid by the production unit is the same as NVAfc.

## 11.9 CONCEPT OF OPERATING SURPLUS

The sum of factor payments in the form of rent, interest and profit is termed as operating surplus. Alternatively, NVAfc less compensation of employees is called operating surplus. In this way, the operating surplus is a measure of factor payments other than the payments made to labour. As such the sum of compensation of employees and operating surplus is same as NVAfc. Rent and interest are property income. Profit is an entrepreneurial income. So operating surplus also equals property income and entrepreneurial income.

## 11.10 CONCEPT OF FINAL EXPENDITURE

A final expenditure is an expenditure on goods and services acquired for final consumption and investment and not for reselling. Expenditure on goods and services acquired by production units for reselling is intermediate expenditure. In other words, final expenditure is an expenditure on final products.

The purchases for final consumption are made by the households and general government. The purchases for investment are made by the production units within the economic territory and by the foreigners. Accordingly, the final expenditure is classified into :

a) Private final consumption expenditure
b) Government final consumption expenditure
c) Gross domestic capital formation
d) Net exports.

Out of the above (a) and (b) are consumption expenditure and (c) and (d) are investment expenditure.

### (a) Private Final Consumption Expenditure (PFCE)

PFCE includes purchases by the households and the non-profit institutions serving households. The households purchase goods and services for satisfaction of wants of their family members. The non-profit institutions serving households consist of institutions like mosque, temples, churches, gurudwaras, charitable hospitals, associations, etc. who provide free services to the households.

### (b) Government Final Consumption Expenditure (GFCE)

GFCE is the expenditure on the free services provided to the people by the general government. The main examples of the free services are that of police, military, educational institutions, hospitals, roads, bridges, legislatures and other government departments.

### (c) Gross Domestic Capital Formation (GDCF)

GDCF is a measure of the total expenditure on investment by the production units within the economic (domestic) territory of a country. This expenditure is of two types : (a) on fixed assets like building, machines, instruments, furnitures, transport vehicles etc. and (b) on stocking of raw materials, semi-finished goods and finished goods. These two types of expenditure are respectively termed as (a) gross domestic fixed capital formation (GDFCF) and (b) net addition to stock. The excess of the closing stock over the opening stock is the 'net addition to stock'. Suppose the reference year is 1997. The stock on 1.1.1997 is called 'opening stock' and that on 31.12.1997 is 'closing stock'. The closing stock less opening stock is a measure of the net addition to the stock during the year.

The GDCF is called gross because the consumption of fixed capital has not been deducted from it. If we deduct the consumption of fixed capital from GDCF we get Net Domestic Capital Formation (NDCF). The NDCF is a measure of the net domestic investment during the year.

### (d) Net Exports

In national income accounting any part of the final products produced during the year but not consumed within the economic territory of the country is treated as investment. By this criteria the exports are treated as investment abroad. Similarly imports are treated as disinvestment. So, exports less imports, i.e. net exports, represent net investment abroad.

The sum total of PFCE, GFCE, GDCF and Net Exports is a measure of total final expenditure of a country during a given year.

## POINTS TO REMEMBER

- Compensation of employees includes all monetary and non-monetary benefits accruing to the employees on account of work performed.
- Rent is the income accruing to the owners of land for the use of their land for production of goods and services.
- Interest is the income accruing to the owners of capital for the funds provided by them to the production units.
- Profit is the income accruing to an entrepreneur for his entrepreneurial services to the production unit.

- Mixed income is a mixture of factor incomes and difficult to allocate among different factor incomes.
- Private final consumption expenditure is the sum of purchases made by the households and the value of free services provided by the non-profit institutions serving households.
- Government's final consumption expenditure is the expenditure on the free services provided to the people by the government.
- Gross domestic capital formation is a measure of the total expenditure on investment by production units within the economic territory of a country. It is the sum of gross domestic fixed capital formation and net addition to stock.
- By deducting consumption of fixed capital from the GDCF we get net domestic capital formation.
- Net export is a measure of investment abroad.

## INTEXT QUESTIONS 11.2

Choose the correct alternative :

(i) Which of the following is not treated as compensation of employees.?

A. Payment of salary.
B. Payment of bonus.
C. Payment of travelling expenses on a business tour.
D. Free accommodation.

(ii) Rent in national income accounting accrues to :

A. Land used for production.
B. Structure erected on land used for production.
C. Land and structure both used for production.
D. Land and structure used for residence.

(iii) The GVAmp exceeds NVAmp by the amount of :

A. Indirect taxes
B. Subsidies
C. Consumption of fixed capital
D. Net factor income from abroad.

(iv) National product exceeds domestic product by the amount of :

A. Exports
B. Factor income received less factor income paid to abroad
C. Factor income recieved from abroad.
D. Imports

(v) The final expenditure is the expenditure on :

A. Consumption only.
B. Investment only.
C. Both consumption and investment.
D. Neither on consumption nor on investment.

(vi) Domestic product at market price exceeds domestic product at factor cost by:

A. Net factor income from abroad.
B. Consumption of fixed capital.
C. Net indirect taxes.
D. Exports.

## WHAT YOU HAVE LEARNT

- The term 'national' in national income is associated with residents. The term 'domestic' in domestic income is associated with 'economic territory'.
- The intermediate products are those which are purchased by production units from other production units and meant for resale. Final products are those which are acquired for final consumption and investment.
- The excess of value of output over intermediate consumption is 'value added'.
- GVAmp = Value of output - intermediate cost.
- NVAmp = GVAmp - consumption of fixed capital.
- NVAfc = NVAmp - indirect taxes + subsidies.
- The economic territory of a country is different from its geographical territory.
- Sum total of value added by all production units located in economic territory of a country is domestic product.
- Domestic product + net factor income received from abroad is national product.
- Net national product at factor cost is same as national income.
- The concept of residents is different from the concept of citizen.
- There are four factor incomes : compensation of employees accruing to labour, rent to land, interest to capital and profits to entrepreneur. Mixed income is a mixture of factor incomes and difficult to allocate among different factor incomes.

## TERMINAL EXERCISE

1. Explain the concept of economic territory.

2. Explain the concept of residents.

3. What is the significance of the distinction between intermediate products and final products.?

4. Explain the concept of value added by giving a numerical example.

5. On the basis of the following derive different measures of value added :

   (a) Value of output.

   (b) Indirect taxes.

   (c) Intermediate cost.

   (d) Consumption of fixed capital.

   (e) Subsidies.

6. Name different factor incomes. Explain briefly their meaning.

7. What is 'mixed income'? Why is there a need for such concept?

8. Name different final expenditure. Explain briefly their meaning.

## ANSWERS

### Intext Questions 11.1

(i) C (ii) B (iii) C (iv) B (v) A (vi) B

### Intext Questions 11.2

(i) C (ii) A (iii) C (iv) B (v) C (vi) C

### Terminal Exercise : Hints

1. Derived from geographical territory by including embassies and similar government offices abroad and excluding foreign embassies and international organisations. [Read section 11.3(a)]

2. (a) All individuals and institutions whose centre of economic interest lies in a country in which they are living or situated.
   (b) Concept of resident is different from citizen. [Read section 11.3 (b)]

3. (a) Intermediate products are those which are purchased for resale by production units from production units.
   (b) Final products are those which are purchased for consumption and investment
   (c) The distinction is useful in avoiding double counting. [Read section 11.4]

4. (a) Excess of value of output over intermediate cost is value added.
   (b) Numerical example [Read section 11.5 (a)].

5. GVAmp = Value of output - Intermediate cost
   NVAmp = GVAmp - Consumption of fixed capital
   NVAfc = GVAmp - Indirect taxes + Subsidies

6. (a) Different factor incomes are (i) Compensation of employees (ii) Rent (iii) Interest and (iv) Profits.
   (b) Meaning of each [Read Section 11.8]

7. (a) Mixed income is that income which is mixture of different factor incomes.
   (b) Need for a separate category arise because we cannot separate this income into different factor incomes.

8. (a) Different final expenditures are (i) Private final consumption expenditure (ii) Government final consumption expenditure (iii) Gross domestic capital formation and (iv) Net exports.
   (b) Meaning of each [Read Section 11.9]