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USES OF NATIONAL INCOME ESTIMATES

13.1 INTRODUCTION

In the previous lessons you have learnt about the meaning of national income and various concepts relating to it. You have also learnt the different methods of estimating national income of a country.

You have also studied that national income is basically a measure of the factor incomes accruing in the process of production and it can be looked at from three different angles: (a) as a sum total of value added by production units; (b) as a sum total of factor incomes paid by the production units and (c) as a sum total of expenditure on final products. An obvious question that will come to your mind is of what uses are these national income estimates? This lesson aims at highlighting some of the uses of national income estimates of a country.

13.2 OBJECTIVES

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

- explain the concept of real national income;
 - distinguish between national income at current prices and at constant prices;
 - explain the method of converting current prices estimates of national income into constant prices estimates;
 - establish that the rate of growth of national income at constant prices is a measure of the rate of economic growth of a country;
 - explain the usefulness of national income data in assessing the relative significance of different industrial sectors of an economy;
 - explain the usefulness of national income data in assessing the distribution of income in a country;
 - explain how national income data is useful in revealing the level of living and the pattern of consumption expenditure in a country;
 - explain how national income data is useful in measuring the level and pattern of investment in a country;
 - infer that inter-country comparisons are possible with the help of national income data of different countries.
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13.3 CONCEPT OF REAL NATIONAL INCOME

(a) Need

National income is a measure of factor income generating activities of a country. Factor incomes are generated in the production units. These are distributed to the owner of the factors of production because of their participation in production process. The income earned is spent on consumption and investment. People spend on consumption to satisfy their wants. They spend on investment to further increase the income generating activities.

In the process of estimating national income, data is collected on value added by production units; on distribution of this value added among the owners of the factors of production for the factor services supplied by them; and on expenditure on consumption and investment. The data so obtained can be helpful in understanding various aspects of an economy. For example, what is the contribution of each industrial sector to total output? How much equally or unequally are incomes distributed in an economy? What are the relative shares of working class and property class in national income? Are people spending more on consumption to raise their standards of living? How much is being invested every year? At what rate the economy is growing? Is it growing faster or slower than other economies? These and many other related questions can be conveniently answered with the help of the data collected during the process of estimation of national income.

But before we explain how these questions can be answered we must first be familiar with the distinction between money income and real national income. It is only on the basis of real income that we can find answers to the above questions.

(b) Measurement of Real National Income

As you know, national income is a money measure of the final goods and services produced in a country during a year. In other words,

$$\text{National income} = \text{Final products} \times \text{price level.}$$

So a change in national income over a period can be due to a change in production or a change in price level or changes in both. You also know that year after year generally the price level increases. So year after year an increase in national income takes place due to an increase in prices of goods and services. So an increase in national income is not due to the increase in the total production in the economy only. In other words, it is not a real increase. Though the money value of total production increases but the total production in quantitative terms itself may not increase in the same proportion. It is the quantitative increase that is meaningful. For this we have to find out the real national income. Money national income does not indicate the change in quantity of production.

Generally, changes take place in both, the quantity of production as well as the price level. If we eliminate from the change in national income that change which is due to the change in price level, we get real change in national income or real national income.

To understand it more clearly let us take a very simple example. Suppose in an economy only chairs are made. Suppose in a particular year, say 1995, 20 chairs are made and the price of each chair is Rs.100. The national income in 1995 is equal to $20 \times \text{Rs.100} = \text{Rs.2000}$. Suppose in 1996, 30 chairs are made and the price is Rs. 150 per chair. So the money national income in 1996 is Rs.4500 ($30 \times \text{Rs.150}$). The money national income increased from Rs.2000 in 1995 to Rs. 4500 in 1996 i.e. more than doubled. Was the number of chairs made in 1996 more than double the number of chairs made in 1995? No, the production has increased from 20 chairs to 30 chairs. This is real increase in national income. To measure it in money terms we will take the prices of chairs in 1995 for calculating the national income in 1996. It would be Rs.3000 ($30 \times \text{Rs.100}$). This shows the national income has increased by 50% (from Rs.2000 to Rs.3000). The production (number of chairs produced) has also increased by 50% (from 20 to 30). This increase is the real increase in national income.

Thus to find out what change has taken place in an economy over a given period, we take the change in real national income over that period. In other words, real national income is the total quantity of final goods and services produced during a year. When we compare it with the real national income of some other year then we do it by eliminating the change in national income due to change in prices over this period.

How do we eliminate the change in national income that takes place due to change in price level? For this we have to understand using the concepts of national income at current prices and national income at constant prices.

(c) National income at current prices and constant prices

In estimating national income for any year the physical output in that year is multiplied by the prices prevailing in that year. For example, for finding the national income for 1996 multiply the physical output of 1996 with prices prevailing during the year 1996. This is called national income at current prices.

Now suppose we intend to compare the national income for the year 1996 with the national income for the year 1991. Both, the levels of physical output and the price levels would be different during the two years. If we multiply the output of both the years by the same price level we can eliminate the effect of change in price level on the estimates of national income. Now if we measure the value of output of 1996 at the prices of 1991 we can call such a measure of national income for 1996 as the national income at constant prices.

In practical national income is first calculated at current prices and afterwards converted into national income at constant prices with the help of price index. The constant prices estimates are obtained by dividing the current prices estimates by the price index.

For preparing the price index one particular year is selected first. The year so selected is called the base year. The price level of the base year is taken to be equal to 100. The price levels of all other years are expressed as percentages of the base year price level. Thus if 1991 is the base year its price level is taken as 100. Suppose by 1996 price level rises by 50%. The price level of 1996 is taken to be 150. In this way price index is prepared for all the years for which the national income estimates are to be compared. (You had already learnt about the construction of index numbers in lesson No. 8).

Let us try to understand it with the help of a numerical example. Suppose the following is known about the national income of a country for the years 1991 and 1996.

Year	National Income at current prices (money income)(in Rs.crores)	Price Index (1991 = 100)
1991	20,000	100
1996	30,000	150

On the basis of the above figures we can calculate national income at constant prices in the following manner:

$$\text{National Income at constant prices in 1991} = \frac{\text{National Income at current prices in 1991}}{\text{Price index of 1991}} \times 100$$

$$= \frac{20000 \times 100}{100} = 20000$$

$$\text{National Income at constant prices in 1996} = \frac{\text{National Income at current prices in 1996}}{\text{Price index of 1996}} \times 100$$

$$= \frac{30000 \times 100}{150} = 20000$$

The national income at current prices for the year 1996 is Rs.30,000 crores while at constant prices it is Rs.20,000 crores.

The significance of the constant prices estimates can now be made more clear with the help of the above illustration. When we compare the estimates of national income at current prices for the year 1996 with that of the year 1991 we find that national income has increased by 50 percent between 1991 and 1996. But this increase is meaningless because the price level also increased by 50 percent during this period. As such the entire increase in national income at current prices is due to the price increase. Actually the amount of goods and services produced in the country is the same in 1996 as it was in 1991.

The real picture is more appropriately given by the estimates of national income at the constant prices. These reveal that national income during the years 1991 and 1996 was the same i.e. Rs.20,000 crores.

From the above it is now clear that 'constant prices' estimates of national income are more appropriate when conclusions are to be drawn from the national income data, particularly while making comparisons.

POINTS TO REMEMBER

- Money income is the income that accrues to the people during the year. Real income is the amount of goods and services that can be purchased from the money income.
- Real income of the people determines the standard of living of the people.
- In national income accounting money income and real income are respectively called 'national income at current prices' and 'national income at constant prices.'
- National income at constant prices is calculated by dividing the national income at current prices by the price index.
- In making comparisons over different years national income data at 'constant prices' is more appropriate.

INTEXT QUESTIONS 13.1

Choose the correct alternative:

- (i) If the percentage rise in money income is less than the percentage rise in the price level:-
- A. Real income rises.
 - B. Real income falls.
 - C. Real income remains the same.
 - D. No relation between money income and real income.
- (ii) Real income is same as:
- A. Income at current prices.
 - B. Money income received.
 - C. Income at constant prices.
 - D. Factor income.

- (iii) If in a country, during a year, national income at current prices rises by 2% and price level rises by 3%, national income at constant prices:
- A. Falls
 - B. Rises
 - C. Remains the same
 - D. No relation between national income at current and constant prices.
- (iv) Money income rises from Rs.1,000 to Rs.2,000 and price index falls from 100 to 50. As a result real income rises by:
- A. 100%
 - B. 200%
 - C. 300%
 - D. 400%
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13.4 USES OF NATIONAL INCOME ESTIMATES

Estimates of national income as well as the data collected during the process of this estimation can both be very useful in studying the performance of various sectors of the economy, structural changes taking place in the economy, the growth of the economy and the changes in the standards of living of the people. Such studies also help in formulating economic policies and plans for the future. Some of the important uses of national income data are as follows:

1. National income as a measure of economic growth

Estimates of national income at constant prices indicate economic growth of a country. The rate of economic growth of a country is measured by the rate of growth of national income at constant prices. For example, the rate of economic growth in India during the year 1993-94 was 4.4 percent. It means that national income at constant prices was higher by 4.4 percent in 1993-94 as compared to the national income at constant prices in 1992-93. Economic growth is broadly speaking an indicator of increase in the level of physical production of goods and services in the economy.

2. National income as an indicator of success or failure of planning

India has adopted planning as a means of economic growth. In a planned economy targets of outputs and rate of economic growth are fixed and resources are allocated accordingly. Whether these targets are achieved or not is indicated by the rate of growth of outputs of industrial sectors and that of national income at constant prices. In this way national income data can help in assessing the achievements of planning. If the targets are not achieved the government can review the situation and take steps to correct the same.

3. Useful in estimating per capita income

Per capita income is obtained by dividing national income by total population of the country. It indicates the average availability of goods and services to the people during a year. Higher the per capita income higher the availability of goods and services on an average to the people and so higher the average standard of living.

4. Useful in assessing the performance of different production sectors

Production units of a country are broadly classified into primary, secondary and tertiary sectors. Primary sector includes production units engaged in exploiting natural resources like agriculture, fishing, mining etc. The secondary sector is engaged in manufacturing goods. The tertiary sector produces services like that of transport, banking, insurance, government etc. These sectors generate factor incomes. The data on factor incomes generated by these sectors can be used to measure their relative contributions to national income. For example, the relative contributions of the three sectors in India is given below in table 13.1.

Table 13.1

Percentage Contribution of Sectors to GDPfc (at 1980 - 81 prices) in India

Sectors	1950 - 51	1994 - 95
Primary sector	57 %	31 %
Secondary sector	15 %	28 %
Tertiary sector	28 %	41 %
All sectors	100 %	100 %

On the basis of the estimates for the year 1994-95 we can say that the tertiary sector contributes the most to national income. The primary sector gets the second place and the secondary sector gets the third.

If we compare contribution of these sectors for the year 1994-95 with the year 1950 - 51, we can also find the change in the relative contributions of different sectors over the last 45 years. On the basis of the data in the table 13.1 we can say that over the 45 years period the relative contribution of the primary sector has declined and that of secondary and tertiary sectors increased. It means that the relative significance of agriculture in the Indian economy is declining and that of manufacturing and services sectors increasing. It is a significant

structural change in India because movement from agriculture to manufacturing and services is a sign of economic development of a country. In this way national income data can be used to find out about the structural changes that had taken place in the economy during a particular period.

5. Useful in measuring inequalities in the distribution of income

All individuals do not have the same income. Some earn more than the others. In other words some are rich and some are poor. It means national income is unequally distributed among people. Some degree of inequality in the distribution of income is bound to exist because individuals differ in age, sex, qualifications, experience of job, physical strength, willingness to take up risky jobs and so on. But when the degree of inequality is very high and not explained by the natural factors it becomes undesirable.

The extent of inequality in a country can be measured from the national income data collected through the income distribution method. For example, from the data we can know the relative share of the working class (i.e. wages etc.) and that of property class (i.e. rent, interest, etc.). If government finds that the level of inequality is high it can take corrective measures to reduce the same. The data about the distribution of income can also be used to assess the effectiveness of the measures taken by the government in this regard.

6. Useful in measuring standard of living

The standard of living of the people of a country is determined by what people spend on consumer goods and services like on food, clothing, housing, education and other necessities, comforts and luxuries. Higher the expenditure on consumption higher is the standard of living of the people.

National income data, when estimated through the expenditure method, reveals consumption expenditure and investment expenditure. If the total consumption expenditure is divided by total population we get per capita consumption expenditure. This per capita consumption expenditure indicates the average standard of living of the people of the country. If this is rising over the years the general standard of living of the people can also be said to be rising. However, this is to be remembered that this expenditure should be estimated at constant prices.

7. Useful in revealing the pattern of consumption

The data on commoditywise expenditure on consumption reveals the consumption pattern of the people. For example, commoditywise data on private consumption reveals the following pattern for the year 1993-94 in India: (Table 13.2)

Table 13.2

**Commoditywise private consumption expenditure in India during 1993-94
(at current prices) (in percentage)**

Commodity Group	Consumption Expenditure
Food	49 %
Clothing	10 %
Rent	6 %
Medical	2 %
Transport	12 %
Education	2 %
Electricity	1 %
Others	18 %
Total	100 %

The above data shows that half of the private consumption expenditure in India is on food and only 2 % on education. By making a comparison of the expenditure data over the years we can know about the changes in the consumption pattern of the people of a country.

8. Useful in measuring the level and pattern of investment

The expenditure method of estimating national income also measures investment expenditure. It gives us information about the total amount of fresh investment made in the country during the year. Investment determines production capacity which in turn influences the rate of growth of the economy. For example, fresh investments made in India during the year 1994-95 were about 25 percent of the gross domestic product. By comparing such figures over the years we can know whether the level of investment in the country is rising or not and also the rate of change.

We can also know the pattern of investment in the country. We can know that how much is invested in agriculture, manufacturing and services, etc. In the year 1993-94, in India, out of about total investment of Rs. 160,000 crores 16% was in agriculture, 35% in manufacturing, 23% in transport and 2% in construction. Government can draw many useful conclusions from such data.

9. Makes international comparisons possible

We can compare the economies of any two countries on the basis of their national income data. We can know whether a country is rich or poor. We can know how much important is agriculture or any other occupation in a country as compared to other countries. We can also compare the level and patterns of consumption and investment in different countries. We can also compare the standards of living on the basis of the per capita incomes. We can also know the rates of growth of different countries and draw useful conclusions.

POINTS TO REMEMBER

- The rate of growth of national income at constant prices is a measure of the rate of economic growth of a country.
- National income is an indicator of success of planning in a country.
- National income data can be used to describe the relative significance of primary, secondary and tertiary sectors of an economy.
- National income data can be useful in measuring the equitableness of distribution of income in the country.
- Consumption expenditure, estimated through the expenditure method of estimating national income, when divided by total population determines the standard of living of the people.
- The data on consumption expenditure can also be used to study the pattern of consumption expenditure in the country.
- Data on investment expenditure, obtained through the expenditure method of estimating national income, is useful in knowing the level and pattern of investment in the country.
- Inter-country comparisons with respect to rate of growth, level of consumption, investment patterns, etc. can also be made on the basis of national income data of different countries.

INTEXT QUESTIONS 13.2

Fill in the blanks with appropriate word from the choices given in brackets:

- (i) The rate of economic growth of a country is measured by the rate of growth of national income at prices. (current, constant)
 - (ii) Production units engaged in manufacturing are a part of sector. (primary, secondary)
 - (iii) Percentage contribution of the primary sector to national income in India is over the years. (increasing, decreasing)
 - (iv) Standard of living of the people of a country is measured by the expenditure. (investment, consumption)
 - (v) Private consumption expenditure on food in India during 1993-94 was about of total. (one-half, one-third)
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WHAT YOU HAVE LEARNT

- Real income is the amount of goods and services that can be purchased with the money income. In a national income accounting money income and real income are respectively called 'national income at current prices' and 'national income at constant prices'.
- It is national income at constant prices which is an appropriate measure when we attempt to draw useful conclusions from the national income data.
- National income at current prices can be converted into national income at constant prices by using price index number.
- The rate of growth of an economy is measured by the rate of growth of national income at constant prices.
- National income data collected through the production method can be used to assess the relative significance of different industrial sectors of an economy.
- National income data collected through the income distribution method can be used to assess the equitableness of distribution of income in a country.
- National income data collected through the expenditure method can be used to assess the standard of living of the people and the level and pattern of investment in the country during a year.
- Data on consumption expenditure gives information about the standard of living and the pattern of consumption of the people of a country.
- Data on investment expenditure provides information on the rate and pattern of investment in a country.
- National income data of different countries makes possible comparison of one country with another with respect to rate of growth, standard of living, pattern of consumption, rate of investment, pattern of investment etc.

TERMINAL EXERCISE

1. Explain the difference between money income and real income.
 2. Explain the difference between national income at current prices and national income at constant prices.
 3. How is national income at constant price derived from national income at current prices?
 4. Explain any four uses of national income estimates of a country.
 5. Explain the role of national income data on assessing the performance of the different industrial sectors of an economy.
 6. Explain how the national income data collected through the income distribution method can be used to draw useful conclusions about an economy.
 7. Explain how the national income data can be useful in drawing conclusions about the standard of living and level of investment in a country.
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ANSWERS

Intext Questions 13.1

(i) B (ii) C (iii) A (iv) D

Intext Questions 13.2

(i) constant (ii) secondary (iii) decreasing (iv) consumption (v) one-half.

Terminal Exercise : Hints

1. Money income : The income we earn is money income.
Real income : The amount of goods and services we can buy from the money incomes (Read section 13.3 b)
 2. National income at current prices is same as money national income. National income at constant prices is same as real national income. (Read section 13.3b).
 3. Can be derived by using price index numbers. (Read section.13.4C)
 4. (i) A measure of economic growth
(ii) An indicator of success of planning
(iii) Useful in estimating per capita income
(iv) Useful in assessing the performance of sectors (Read section 13.4)
 5. We can find out relative contributions of primary, secondary and tertiary sectors to national income. (Read section 13.4)
 6. We can know how equally or unequally is income distributed among people. (Read section 13.4)
 7. We can know about the levels and patterns of consumption and investment. (Read section 13.4)
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