Economics

JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
ARUSHA CAMPUS

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UNIT INSTRUCTOR: THOMAS MAHUNDA

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PARTICIPANT:
* MROKI, Evans

Determination of National Income by the Equality of Saving and Investment Method:

Definition and Explanation:
This approach is based on the Keynesian definitions of saving and investment. According to Keynes, the level of national income, in the short run, is determined at a point where planned or intended saving is equal to planned or intended investment. Saving as defined by Keynes is that part of income which is not spent on consumption (S = Y - C). On the other hand, investment is the expenditure on goods and services not meant for consumption. (I = Y - C).

According to Keynes, if at any time, the intended saving is less than intended investment, it implies that people are spending more on consumption. The rise in consumption will reduce the stock of goods in the market. This will give incentive to entrepreneurs to increase output. Likewise, if at any time intended saving is greater than intended investment, this would mean that people are spending lesser volume of money on consumption. As a result of this, the inventories of goods will pile up. This will induce entrepreneurs to reduce output. The result of this will be that national income would decrease. The national income will be in equilibrium only when intended saving is equal to intended investment.

Example and Diagram/Curve:
The determination of national income is now explained with the help of saving and investment curve

below:

In the above figure, income is measured on OX axis and saving and investment on OY axis. SS is the saving curve which shows intended saying at different levels of income. The investment curve is drawn parallel to the X axis which shows that investment does not change.

The entrepreneurs intend to invest $50 only irrespective of the amount of income. Saving (SS) and investment curves (II) intersect each other at point M. If the conditions stated above remain the same, the size of equilibrium level of income is $250.

Disequilibrium:
Under the assumed conditions if there is inequality between saving and investment or disequilibrium, the forces will operate in the economy and restore the equilibrium position. Let us suppose that the income has increased from the equilibrium level OL to ON ($300). At this level of income, desired saving is greater than the desired investment. When intended saving exceeds planned or intended investment, the businessmen will not be able to dispose off all their current output. They will slow down their productive activities. This will result in reducing the number of workers employed in factories and a decrease in the income. This process will go on until due to a decrease in income, people's saving is reduced to the level of investment ($50). The equilibrium income is $250.

In the same way, income cannot remain below this equilibrium level of $250. If at any time, income falls below the equilibrium level, then it means that people are investing more than they are willing to save I > S. They will increase productive activities as they are making high profits. The number of workers employed in the factories will increase. This will result in an increase in income and higher saving. This rise in national income will go on up to a point where saving and investment are just in balance and that will be the equilibrium level. At this point, income will have the tendency of neither to rise nor to fall. It will be in a state of rest. It is, thus, clear that national income is determined at a point where the intended investment is equal to intended saving.

Determination of Equilibrium Level of National Income According to Aggregate Demand and Aggregate Supply Method:

Definition and Explanation:
While determining the level of national income in a two sector economy, it is assumed that it is an economy where there is no role of the government and of foreign trade. In other words, it is a closed economy with no government intervention. The two sector economy comprises of households and firms.

According to J. M. Keynes, the equilibrium level of national income is that situation in which aggregate demand (C+ I) is equal to aggregate supply (C + S). The aggregate demand (C+ I) refers to the total spending in the economy. In a two sector economy, the aggregate demand is the sum of demands for the consumer goods (c) and investment goods by households and firms respectively. The aggregate demand curve is positively sloped. It indicates that as the level of national income rises, the aggregate

demand (or aggregate spending) in the economy also rises.

Aggregate supply (C + S):

It is the flow of goods and services in the economy. In other words, the value of aggregate supply is equal to the value of net national product (national income). The aggregate supply curve (C + S) is a positively sloped 45° helping line. It signifies that as the level of national income rises, the aggregate supply also rises by the same proportion.

Equilibrium level of National Income:

According to Keynesian model, the equilibrium level of national income is determined at a point where the aggregate demand curve intersects the aggregate supply curve. The 45° helping line represents aggregate supply. By definition, output equals income on each point of aggregate supply curve. The determination of the level of aggregate income is explained below.

Diagram/Curve:

In the figure above, income is measured along OX axis and expenditure on OY axis. The aggregate demand curve (C + I) intersects the aggregate supply curve (45° line) at point K point. K, here is the only point where the economy is willing to spend exactly the amount which is necessary to dispose off the entire output. The equilibrium level of income is $250 billion. It may, however, be noted that this equilibrium output does not mean in any way the full employment output. Departure from Equilibrium Level of Income:

Now a question arises that if at any time there is a departure from the equilibrium income of $250 billion, how will the economy move towards an equilibrium level? Here we examine two possible levels of income other than the equilibrium level.

Let us suppose first that the actual income is $300 billion rather than $250 billion. According to aggregate demand, schedule (C + I), (the actual consumption + investment expenditure) at an income of $300 billion falls short by $30 billion (shown by bracket). This means that the goods worth $30 billion are not sold. When the inventories pile up with the business, they would curtail this production and provide fewer jobs. There will thus be a decline in total income which will continue till the income falls to the equilibrium level of $250 billion.

Now let us suppose that the level of income fails to $100 billion. According to aggregate demand schedule represented by (C + I) curve, the expenditure at this level exceeds income by $50 billion (shown by bracket). The increase in demand of consumer and investment goods will induce the businesses to increase their output. The higher rate of production will provide more jobs to the workers.

The level of income would rise and the upward drive continues till the income reaches the equilibrium level of $250 billion. We, thus, conclude by saying that an economy sustains only that level of income

where the total quantity supplied and the aggregate quantity demanded are equal. At this equilibrium national income of $250 billion, the firms have neither the tendency to increase output nor the tendency to decrease output. Hence, $250 billion is the equilibrium level of national income. The equilibrium output, in this simple Keynesian analysis, does not mean full employment.

METHODS OF COMPUTING/MEASURING NATIONAL INCOME

There are three methods of measuring national income of a country. They yield the same result. These methods are:

1. Product Method or Value Added Method

Definition and Explanation:

Goods and services are counted in gross domestic product (GDP) at their market values. The product approach defines a nation's gross product as that market value of goods and services currently produced within a nation during a one year period of time.

The product approach measuring national income involves adding up the value of all the final goods and services produced in the country during the year. Here we focus on various sectors of the economy and add up all their production during the year. The main sectors whose production value is added up are: (i) agriculture (ii) manufacturing (iii) construction (iv) transport and communication (v) banking (vi) administration and defense and (vii) distribution of income.

Precautions for Product Method or Value Added Method

There are certain precautions which are to be taken to avoid miscalculation of national income using this method. These in brief are:

* Problem of double counting: When we add up the value of output of various sectors, we should be careful to avoid double counting. This pitfall can be avoided by either counting (he final value of the output or by including the extra value that each firm adds to an item.

* Value addition in particular year: While calculating national income, the values of goods added in the particular year in question are added up. The values which had previously been added to the stocks of raw material and goods have to be ignored. GDP thus includes only those goods, and services that are newly produced within the current period.

* Stock appreciation: Stock appreciation, if any, must be deducted from value added. This is necessary as there is no real increase in output.

* Production for self consumption: The production of goods for self consumption should be counted while measuring national income. In this method, the production of goods for self consumption should be valued at the prevailing market prices.

2. Expenditure Method:

Definition and Explanation:

The expenditure approach measures national income as total spending on final goods and services produced within nation during a year. The expenditure approach to measuring national income is to add up all expenditures made for final goods and services at current market prices by households, firms and government during a year. Total aggregate final expenditure on final output thus is the sum of four broad categories of expenditures: these are:-

i. Consumption expenditure (C): Consumption expenditure is the largest component of national income. It includes expenditure on all goods and services produced and sold to the final consumer during the year.

ii. Investment expenditure (I): Investment is the use of today's resources to expand tomorrow's production or consumption. Investment expenditure is expenditure incurred on by business firms on (a) new plants, (b) adding to the stock of inventories and (c) on newly constructed houses.

iii. Government expenditure (G): It is the second largest component of national income. It includes all government expenditure on currently produced goods and services but excludes transfer payments while computing national income.

iv. Net exports (X - M): Net exports are defined as total exports minus total imports. National income calculated from the expenditure side is the sum of final consumption expenditure, expenditure by business on plants, government spending and net exports.

NI = C + I +G + (X - M) Precautions

Precautions for Expenditure Method:
While estimating national income through expenditure method, the following precautions should be taken:
* The expenditure on second hand goods should not be included as they do not contribute to the current year's production of goods.

* Similarly, expenditure on purchase of old shares and bonds is not included as these also do not represent expenditure on currently produced goods and services.

* Expenditure on transfer payments by government such as unemployment benefit, old age pensions, interest on public debt should also not be included because no productive service is rendered in exchange by recipients of these payments.

3. Income Approach:

Income approach is another alternative way of computing national income; this method seeks to measure national income at the phase of distribution. In the production process of an economy, the factors of production are engaged by the enterprises. They are paid money incomes for their participation in the production. The payments received by the factors and paid by the enterprises are wages, rent, interest and profit. National income thus may be defined as the sum of wages, rent,

interest and profit received or occurred to the factors of production in respect of their services in the production of goods. Briefly, national income is the sum of all income, wages, rents, interest and profit paid to the four factors of production. The four categories of payments are briefly described below:

i. Wages: It is the largest component of national income. It consists of wages and salaries along with fringe benefits and unemployment insurance.

ii. Rents: Rents are the income from properly received by households.

iii. Interest: Interest is the income private businesses pay to households who have lent the business money.

iv. Profits: Profits are normally divided into two categories (a) profits of incorporated businesses and (b) profits of unincorporated businesses (sole proprietorship, partnerships and producers cooperatives).

Precautions for Income Approach:
While estimating national income through income method, the following precautions should be undertaken.
* Transfer payments such as gifts, donations, scholarships, indirect taxes should not be included in the estimation of national income.

* Illegal money earned through smuggling and gambling should not be included.

* Windfall gains such as prizes won, lotteries etc. is not be included in the estimation of national income.

* Receipts from the sale of financial assets such as shares, bonds should not be included in measuring national income as they are not related to generation of income in the current year production of goods.

Why Three Methods of Computing/Measuring National Income are Equal
The three approaches used for measuring national income give the same result. The reason is the market value of goods and services produced in a given period by definition are equal to the amount that buyers must spend to purchase them. So the product approach which measures market value of goods and services produced and the expenditure approach which measures spending should give the same measure of economic activity.

Now as regards the income approach, the sellers' receipts must equal what the buyers spend. The sellers' receipts in turn equal the total income generated by the economic activity. Thus, total expenditure must equal total income generated implying that the expenditure and income approach must also produce the same result.

CONSIDERATIONS WHEN CHOOSING METHODS TO COMPUTE NATIONAL INCOME Too many

factors are important to be considered in the choosing of a method to compute national income. Some of this are:- i. The purpose of the national income analysis.

ii. Availability of the necessary data.

iii. The size of the budget spared for the process of computation of the nation income.

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