NATIONAL INCOME ACCOUNTING

Introduction: This is a numerical based chapter to calculate national income by different methods (Income, expenditure and value added method, their steps and precautions). Numerically to determine private income, personal income, personal disposable income, National disposable income (net and gross) and their differences.

Gross National Product

- Now, the GNP measures the total value of all final goods and services produced within a specific period of time by a country's residents and enterprises. While calculating GNP, economists deduct the income earned domestically by foreign individuals and companies and add the income earned by residents and companies working abroad.
- And that is the basic difference between GNP and GDP. While Gross National Product considers the ownership, GDP measures the total value of all goods and services produced in a country regardless of foreign or domestic ownership. Let's now understand the various components of Gross National Product.
- GNP is the sum of household consumption expenditure, private investment, government expenditure, and net exports. And to this value, economists add the income earned by overseas residents and enterprises and deduct the income earned by foreign residents and enterprises. Let's look at each component in detail.
- First, household consumption expenditure includes the expenditure on durable goods, non-durable goods, and services. The next component, private investment, includes the capital expenditure or investment on new capital for producing consumer goods. Government expenditure refers to the total expenditure by federal, state, or local governments on final goods and services. And finally, net exports refers to the difference between the total imports and exports.

Net National Product

- NNP is the total value of all final goods and services produced by the factors of production of a country within a given specific time minus depreciation. In other words, NNP is GNP – depreciation. Now while calculating the NNP, economists take into consideration two very important factors—indirect taxes and subsidies.

- The market price of any product includes taxes, which go to the government. Hence, while calculating the NNP, economists need to deduct the taxes. Similarly, the government also provides subsidies to encourage production of certain goods and services. And with that being the case, we need to add these subsidies while calculating the NNP. The NNP after considering taxes and subsidies is called the NNP at factor cost or national income. National Disposable Income and Private Income Apart from the GNP and the NNP, two other macroeconomic identities that you should be familiar with are the national disposable

Income and the private income. The national disposable income refers to the total value of all goods and services a country has at its disposal.

- The national disposable income also includes current transfers from the rest of the world (for example, gifts and aids received from other countries). Basically, the national disposable income refers to the income an economy has for its consumption expenditure without having to sell off any assets for the same. And that's the reason why it is an important economic indicator.

- Private income is the final value of all incomes received by the private sector. In this context, the private sector refers to the residents and enterprises of a country. Private income also includes the national debt interest, the net factor income from abroad, the current transfers from the government, and the net transfers from the rest of the world.

Solved Question for You

Q: Identify whether the following statement is true or false.

"The gross national product or GNP takes into account the depreciation cost incurred in the production of goods and services."

Answer: The statement is False. The net national product or NNP is the macroeconomic identity that accounts for the depreciation cost. NNP = GNP – Depreciation.

Methods of Calculating National Income

Now that you are familiar with the concept of the circular flow of income, let's understand the methods of calculating national income. Calculating and measuring national income is important because that's how we can assess an economy's growth rate. There are several methods of calculating national income. Let's briefly look at each method.

Income Method

The income method of calculating national income focuses on the production perspective. Now production of goods and services involves the use of land, labour, capital, and so on. And if we consider these factors of production, income is generated via rent, wages and salaries, profits, and interest.

We can then calculate the national income by adding all these types of income. Another important source of income is mixed income. Mixed income refers to the income generated by self-employed professionals and sole proprietors.

According to the income method:

National Income = Rent + Wages + Interest + Profit + Mixed-Income

The income method, however, does not consider transfer payments, prize money (lotteries), illegal money, profit tax, and sale of second-hand goods.

Expenditure Method

The expenditure method of calculating national income focuses on the expenditures. Now expenditure refers to all the purchases made by residents, Government, or business enterprises. The expenditure method takes the following elements into consideration:

- Purchase of consumer goods and services by residents and households (C)
- Government expenditure on goods and services (G)
- Business enterprises' expenditure on capital goods and stocks (I)
- Net exports (exports-imports) (NX)

  Hence, according to the expenditure method:

$$\textit{National Income} = C + G + I + NX$$

However, the expenditure method excludes expenditure on second-hand goods and purchase of shares and bonds.

Value-Added Method

The value-added method of calculating national income focuses on the value added to a product at each stage of production. To calculate the national income using this method, we will have to first calculate the net value added at factor cost (NVA_{FC}). And to calculate the (NVA_{FC}), we will have to deduct the net indirect taxes.

Usually, this method involves dividing the economy into various industries such as agriculture, fishing, transport, communication, and so on. Then by calculating the value added ((NVA_{FC}) at each stage, we can derive the national income. Now since this method concentrates on the net value added by each component, we would need to exclude or subtract the following elements from the output of each enterprise:

- Consumption of raw materials
- Consumption of capital
- Net indirect taxes

Now if we add the NVA_{FC} of all enterprises of an industry, we get the net value added at factor cost for that industry. And by adding the NVA_{FC} of all industries, we get the net domestic product at factor cost, which is represented as NDP_{FC}. And to this, if we add the net factor income from abroad, we get the national income.

Hence, according to the value-added method:

National Income = (NDP_{FC}) + Net factor income from abroad

Solved Example for You

Q: Which of the following sources is an exception while calculating national income using the income method.

a. Salaries

b. Rent

c. Profit from sale of second-hand goods

d. Mixed income

NAT DOMESTIC PRODUCT (NDP)

- The net domestic product is defined as the net value of all the goods and services produced within a country's geographic borders. It is considered a key indicator of economic growth of a country.
- The net domestic product (NDP) is calculated by subtracting the value of depreciation of capital assets of the nation such as machinery, housing, and vehicles from the gross domestic product (GDP).
- The NDP also takes into account the other factors such as obsolescence and complete destruction of the asset. The depreciation is also referred to as capital consumption allowance.
- If the country is unable to replace the capital stocks that are lost through depreciation, it experiences a fall in the GDP of the country.
- If the gap between the GDP and NDP is narrower or smaller, then it is considered good for an economy. Also, it indicates economic balance. However, a wider gap between the GDP and NDP shows an increase in the value of obsolescence. Such an increase along with deterioration of the capital stock value indicates economic stagnation.

The formula for NDP can be expressed as follows:

NDP = GDP – Depreciation

Where,

NDP = Net domestic product

GDP = Gross domestic product

Depreciation = Depreciation of capital assets such as equipment, vehicles, housing, and more

As the NDP takes into account the depreciation of capital assets, it is considered to be superior to the GDP as a measure of well-being of a nation.

This concept is about NDP or net domestic product that serves as an important factor for determining the economic health of a country. To read more about such interesting concepts on economics for commerce, stay tuned to our website.

Nominal and Real GDP

Gross domestic product (GDP) defines the economic worth of products and services manufactured in a country in a definite financial year. It also accounts for the revenue received by foreign citizens locally and the insufficient income earned by the country's residents abroad.

Whenever the measurement of GDP is at current values, it represents the nominal GDP and the real GDP is evaluated at fixed prices.

Both the GDPs are financial tools for estimating a nation's economic development and growth. However, there is still some confusion on identifying the GDP that indicates a nation's development in a better way. This article will look into the variations between nominal and real GDPs.

Nominal GDP Definition

Nominal gross domestic product is GDP that is evaluated at the present market prices. GDP is the financial equivalent of all the complete products and services generated within a nation in a definite time.

The nominal varies from the real and incorporates changes in cost prices due to an increase in the complete cost price. Generally, economists utilize a gross domestic factor to change the nominal GDP to the real GDP, which is also known as current dollar GDP or chained dollar GDP.

Real GDP Definition

Real GDP is an inflation-adjusted calculation that analyses the rate of all commodities and services manufactured in a country for a fixed year. It is expressed in foundation year prices and referred to as a fixed cost price.

It is also known as inflation-corrected GDP or constant price GDP. The real GDP is regarded as a reliable indicator of a nation's economic growth as it solely considers production and is free from currency fluctuations.

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 price	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

GDP and Welfare

In general GDP and Welfare are directly related with each other. A higher GDP implies that more production of goods and services. It means more availability of goods and services. But more goods and services may not necessarily indicate that the people were better off during the year. In other words, a higher GDP may not necessarily mean higher welfare of the people.

There are two types of GDP:

Real GDP: When the goods and services are produced by all producing units in the domestic territory of a country during an a/c. year and valued these at base year's prices or constant price, it is called real GDP or GDP at constant prices. It changes only by change in physical output not by change price level. It is called a true indicator of economic development.

Nominal GDP: When the goods and services are produced by all producing units in the domestic territory of a country during an a/c. year and valued these at current year's prices or current prices, it is called Nominal GDP or GDP at current prices. It is influenced by change in both physical output and price level. It does not consider a true indicator of economic development.

Conversion of Nominal GDP into Real GDP

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price index}} \times 100$$

Price index plays the role of deflator deflating current price estimates into constant price estimates. In this way it may be called GDP deflator.

Welfare means material well being of the people. It depends on many economic factors like national income, consumption level quality of goods etc and non-economic factor like environmental pollution, law and order etc. the welfare which depends on economic

Factors is called economic welfare and the welfare which depends on non-economic factor is called non-economic welfare. The sum total of economic and non-economic welfare is called social welfare. Conclusion thus GDP and welfare directly related with each other but this relation is incomplete because of the following reasons.

Limitation of percapita real GDP/GDP as a indicator of Economic welfare: Non monetary exchange

Externalities not taken into GDP but it affects welfare.

Distribution of GDP.

All products may not contribute equally to economic welfare.

Contribution of some products may be negative.

Inflation may give falls impression of growth of GDP.

Some Basic Concepts of Macroeconomics

Macroeconomics is a vast subject and a field of study in itself. However, some quintessential concepts of macroeconomics include the study of national income, gross domestic product (GDP), inflation, unemployment, savings, and investments to name a few. Let's discuss a few concepts.

Income and Output

One of the most important concepts of macroeconomics is income and output. The national output is the total amount of all goods and services produced in a country during a specific period. And when production units or organizations sell everything they produce, they generate an equal amount of income. Hence, you can measure output by calculating the total income from the sale of all goods and services.

In relation to macroeconomics, economists usually measure national income or output by gross domestic product or GDP. By measuring GDP, economists can understand the market swings and changes. They can identify what measures to take to improve the GDP of the country. With technological advances, capital increase, and acquisition of state-of-art equipment, production units and organizations can increase national output and income. However, income and output can be affected by the recession and other market factors.

Unemployment

Another important component of macroeconomics is unemployment. Economists measure the unemployment rate in an economy by calculating the percentage of individuals without jobs. Unemployment categories include classic unemployment, frictional unemployment, and structural unemployment.

Classical unemployment is when wages are too high for employers to consider hiring more workers. Frictional unemployment occurs when the time taken to search for an appropriate employee is too long. Structural unemployment occurs when there is a mismatch between a worker's skills and the actual skill required for a job. Another important category of unemployment is cyclical unemployment that occurs when an economy's growth is stagnant.

Inflation and Deflation

The study of inflation and deflation is another important aspect of macroeconomics. The term inflation refers to an increase in the prices of goods and services across the country. And the term deflation refers to a decrease in the prices of goods and services. Economists measure inflation and deflation by studying price indexes. A price index is the weighted average of price for a class of products and services.

Inflation occurs when an economy grows too quickly. Deflation, on the other hand, occurs when an economy declines over a period of time. By studying the inflation and deflation trends, economists can help curb inflation rates by taking appropriate measures.

Too much inflation can lead to negative consequences and continuous deflation can cause low economic output.

Macroeconomic Policies: Now that you are familiar with some of the basic concepts of macroeconomics, let's try and understand some macroeconomic policies.

The two main macroeconomic policies that a government may apply to bring about stability are the monetary policy and the fiscal policy.

Monetary Policy

The monetary policy is an important process, which is under the control of the monetary authority of a country. This monetary authority is usually the central bank or the currency board. The monetary policy is usually implemented by the central bank to stabilize prices and to increase the strength of a country's currency.

The monetary policy also aims to reduce unemployment rates and stabilize GDP. It also controls the supply of money in an economy. For example, the central bank of a country can pump money into an economy by issuing money to buy bonds and other assets. On the other hand, the central bank of a country can also sell bonds and take money out of circulation.

Fiscal Policy

The fiscal policy is a process that makes use of a government's revenue generation and expenditure as tools to control economic windfalls. The government uses the fiscal policy to stabilize the economy during a business cycle. For instance, if production in an economy does not match the required output, the government can spend on idle resources and help in increasing output.

Usually, economists prefer the monetary policy over the fiscal policy. This is because the monetary policy is under the control of the central bank of a country, which is an independent organization. The fiscal policy is under the control of the government, which can be affected by political intentions.

Q: National Income of country is also known as _______________

a. GDP

b. GNP

c. NNP

d. All of the above

Answer; The correct option is “C”. The National income of a country is the Net National Product or the NNP.We calculates it at either market price or factor cost. When we calculate it at factor cost it is the National Income.

Final goods and its parts

Final goods are referred to as those goods that do not require further processing. These goods are also known as consumer goods and are produced for the purpose of direct consumption by the end consumer.

In simple words, final goods are commodities that are manufactured by a company for a subsequent consumption by the consumer. These goods satisfy the needs or wants of a consumer.

Final goods consist of the following:

1. Goods that are purchased by the households are meant for the final consumption. For example, television, milk, ready to eat foods, medicines, and more.
2. It also consists of the goods that are purchased by the firms for investment purposes or for capital formation.

Classification of Final Goods

Final goods can be classified into the following two broad parameters:

1. Buying habits
2. Durability

Let us know more in detail about these parameters.

Buying habits

The following categories of final goods can be classified based on the buying habits of a consumer.

1. **Convenience goods** Convenience goods are those goods that are available and regularly consumed. Examples of such goods are the goods that are regularly used such as milk, bread, pulses, and more.

2. **Specialty goods** Specialty goods are consumed by the upper class of the society, as these are mostly goods that provide luxury and are expensive. These goods are not a necessity; rather, the purchase is made based on the user’s desires. Examples of such goods are antique cars, jewellery, and more.

3. **Shopping goods:** These types of goods require more planning on the consumer's part for purchase, are durable and, more expensive than the convenience goods. Examples of such goods are refrigerators, televisions, laptops, and more.

4. **Unsought goods**: These types of goods are available in the market but are not purchased often by the consumers. Examples of such goods are fire extinguishers, snow jackets, and more.

Durability

Based on the durability of goods, there are three types of goods.

1. Services
2. Non-durable goods
3. Durable goods

Services are intangible in nature, but they provide satisfaction to the consumers. They are variable and inseparable. Examples of service include salon services, automobile repair services, and more.

Non-durable goods are goods that have a finite lifespan and are to be consumed as soon as possible. For example, milk, beverages, and more.

Durable goods are those goods that have a higher lifespan than non-durable goods. For example, cars, equipment, and more.

Circular Flow of Income and Methods of Calculating National Income

Capital goods

Capital goods are referred to as the fixed or tangible assets that are purchased by a business in order to produce finished products or consumer goods. Capital goods are not readily convertible into cash. They are durable and they do not wear out quickly.

The most common examples of capital goods can be equipment, machinery, buildings, computers, and more. The concept of capital goods is most commonly used in macroeconomic terms where it is used in determining the capital formation and the production capacity.

In order to produce goods, four factors are essential, which are capital goods, land, labour, and entrepreneurship. These four factors are collectively known as the primary factors of production.

Capital goods can be said to be the goods that can be used to increase production. The most common types of capital goods are referred to as plant, property, and equipment. For purchasing capital goods, the producer must make a considerable amount of investment. Therefore, the purchase of a capital good is referred to as a capital expense in accountancy.

In accountancy, as capital goods are not consumed in a year, they are depreciated to the extent of their useful lives using the methods of depreciation.

Importance of Capital Goods in the Economy

Capital goods are high investment products and play an important role in the economy. They act as an entry barrier for new companies that lack the necessary funds to acquire such equipment. If a business is unable to produce goods due to the lack of equipment, then it cannot compete in the market.

Capital goods play a vital role in increasing the production of goods in the long term, or in other words, it increases the production capacity of goods and services.

However, if there is an excess of capital goods, then it can lead to a reduction of consumption. Thus, an economy must maintain the balance between the consumer goods and the capital goods.

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Father of Economics

Adam Smith is regarded as the founding father of modern economics (it was known as political economy at that time). He was a Scotsman and a professor at the University of Glasgow. Philosopher by training, his well known work *An Enquiry into the Nature and Cause of the Wealth of Nations* (1776) is regarded as the first major comprehensive book on the subject. 'It is not from the benevolence of the butcher, the brewer, of the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantage' is often cited as an advocacy for free market economy. The Physiocrats of France were prominent thinkers of political economy before Smith.

Net investment:

- It is defined as gross investment minus depreciation on existing capital. Net investment, in a nutshell, is the increase in productive stock.
- **Net investment = Gross Investment – Depreciation**