

**Economic Environment and Business Strategy**  
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**Lecture- 09**

**Macroeconomic Environment and GDP**

Welcome to this session on the macroeconomic environment. The macroeconomic environment refers to the overall conditions of an economy, as captured through broad indicators such as output, employment, inflation, and policy directions. It sets the context in which businesses operate, governments make decisions, and households plan their economic choices. In this session, our focus is on one fundamental concept called Gross Domestic Product (GDP), which is abbreviated as GDP. GDP measures the total value of goods and services produced within an economy over a specified period. It is the most widely used indicator of economic performance, growth trends, and cross-country comparisons.

We will discuss what GDP captures, how it is measured, and what it can and cannot reveal about the health of an economy. In addition, other key macroeconomic topics, such as inflation, interest rates, the business cycle, and fiscal and monetary policies, will be covered in later sessions, where they will be examined in greater detail and context. Let's begin by unpacking what GDP really tells us and why it remains central to economic analysis. As you can see, when comparing countries or analyzing economic growth over time, we typically use GDP.

We use GDP to measure whether the economy is growing and at what rate it is growing. In this case, the measurement of GDP is the primary variable we use to measure economic growth. In this case, the methodology used to measure GDP is called national income accounting. Let's begin with a formal definition of GDP. So, GDP refers to the value of all goods and services produced within a country's domestic territory over a given period, such as a quarter or a year.

So, when we learn about GDP, which represents the total economic activity, I will bring two economic agents to illustrate this concept here. One is households and the second one is firms. As you remember from a previous session, households are the owners of all four factors of production: labor, land, capital, and entrepreneurship. They are the owners of the factors of production. This is the market for factors of production, and firms utilize these factors to produce goods and services.

In return, they will receive wages, rent, and profits as income. Ultimately, it becomes a source of income for households. As you can see, by selling their factors of production, giving their land, labor, and capital, and employing these factors, they receive in return the factor income, which we can call income. Actually, later, we will say that this is our income. Suppose households use their factors of production to produce 100 billion units of goods and services.

Focusing on simple, clear examples like this helps students feel at ease when learning about how income is distributed into wages, rents, and other shares. 25 becomes profit, so this 100 is distributed among these three in three forms: wage, rent, and profit. Interest should also be included as interest income. Let us make it this way: 10 plus 5. Therefore, the total four-factor income is distributed among the households.

So, that means when 100 billion is produced here, you can equivalently see that 100 billion in factor income is generated. Billions of income have been generated here, so using this income—because firms have already produced goods and services—households spend this money and buy goods and services. This becomes revenue for the firms, and in return, they provide goods and services. The goods and services are purchased, so all this 100 billion is again coming here as 100 billion of expenditure. That has taken place here, so what we have seen is that on one side, the total production, for example, is 100 billion.

You can identify this as the 100 billion production. Here, the total income is 100 billion, and the total expenditure is also 100 billion. Using this circular flow diagram, we can see that total production represents the total value of goods and services in each period. For example, in our case, the number is 100 billion. And equivalently, there are 100 billion in income, and equivalently again, there are 100 billion in expenditure.

So, what you can see is that total production equals total income, which equals total expenditure in an economy at a given period. So, at equilibrium, the amount of output produced equals the amount of aggregate supply demanded, which is equal to aggregate demand. Therefore, we can see here that in this case, we identify this as the total economic activity in this economy. We measure this economic activity in three ways: in terms of total production, total income, and total expenditure. In this way, we can see that we can utilize this framework to measure GDP.

I'm showing you what happens when we bring the government here and the foreign sector. So, in the previous figure, we have shown only two economic agents. One is firm, and the other is a household. And now we have the government, an additional economic agent, that is in the picture. We are also bringing the foreign sector into the picture.

What happened then...? Though we said that total production equals total income, which equals total expenditure, there can be some leakages because domestic households, as I

mentioned in the previous picture, spend, but here, what happens is that they don't spend all their income on buying goods and services; instead, they save. For example, out of 100, suppose their saving are 10.

As you can see, there is a leak of R10. Similarly, the government collects taxes from households and firms. Suppose they collect a tax of 70%, with 10% being the tax portion. Similarly, we import goods and services from abroad, including those from other countries. That means that out of our total income, for example, 10%, we are giving and spending abroad.

All three of these are leaks. For example, in the previous picture, I showed that 100 total products equal 100 total income, which in turn equals 100 total expenditures. Then, what happens here in this picture? You can see that the total product is 100, and the total income is also 100. However, out of the total expenditure of 100, the government takes away 10 in the form of tax, and 10 is saved in the financial markets. And 10 is used for financing imports, so that means it becomes 70.

Not only are these leakages, but even with leakages, the government's 10% tax rate comes back to the economy when it spends the money. This means they'll be paying 100% into the economy. And when households save, they will invest this in the financial system, for example, in banks. They will then lend this to financial system institutions, which will lend it to firms and households for buying goods and services, as well as for investment purposes. That means investment is nothing but the purchase of capital goods. And again, when we are importing, we also export at the same time. Simply put, when there is a 70, this leakage is filled by, in the form of injection, which is 30, comprising government spending, investment, and exports; this will compensate for the leakages.

From this diagram, if there are leakages, they can be compensated through injection into these heads. Returning to our initial figure, we observed that it represents the circular flow of income, output, and expenditure in the circular flow. In this way, the circular flow represents the economic activity of a country, summarizing all its financial activities. So, in that way, that's the economic activity we can measure to determine the national output, national income, or national expenditure. We can identify it in three places, which means we can measure it using three methods.

One is called the product method, which is the total output, identifying or measuring what the total output or total product is in the economy, and the second one We can also identify this as the GDP, which represents the total factory income in an economy at a given point in time; alternatively, we can determine the total expenditure in an economy at a given point in time. This means that from the expenditure side, we get the total spending, total income generated, and total production of goods and services. In summary, we are stating that the gross domestic product can be calculated in three

different ways. One is called the production method, which is the sum of all values added by all producers of both intermediate and final goods, and the second is called the income method. That is the total income claims generated by the total production of goods and services. The third method is the expenditure method, which involves the expenditure needed to purchase all final goods and services produced during the period.

Before proceeding, let me clarify this once again. We can also refer to it as gross domestic product; alternatively, we can also call it gross domestic expenditure. This one can be replaced by gross domestic product, which is equivalent to pay and expenditure. One more thing, we are talking about gross domestic product, which refers to the total value of goods and services produced, revenue generated, and expenditure incurred within a domestic area. Of a country, whatever is produced within India, be it by foreigners or Indians, within the domestic territory of the country, is called gross domestic product (GDP) or gross domestic income (GDI) or gross domestic expenditure (GDE), because GDI means gross domestic income or gross domestic expenditure.

So, let's go one by one, starting with the production approach. The production method here uses gross domestic product, which represents the current market value of newly produced final goods and services within a given period, typically a year, in the economy. The essential points to note here are that you need to consider the market value, as well as newly produced goods and final goods, and the period within the economy. Therefore, for market values, we follow the aggregation rules by multiplying the current price times the quantity of goods one, plus the current price times the quantity of goods two, and so on. To illustrate the product method, let's consider a specific shop.

How much it contributes to the GDP in each period, let's take, for example, because the definition of GDP, as per our approach, is the market value of all goods and services produced. For example, let's take a shop, such as a Cafe Coffee Day shop. Suppose its total annual revenue is 10 lakhs per year. Can we say that 10 lakh is its contribution to the GDP? I don't think so, because the reason I remember some components of the output produced by it is that they were accounted for elsewhere as well. For example, in coffee production, you know that you need coffee powder, milk, sugar, and electricity.

Suppose the sugar factory already accounts for sugar, milk is already accounted for as a GDP contribution in the dairy firm, and then there is a coffee powder-producing firm. Then, when we say that 10 lakh is their GDP contribution, they may use all these inputs: for example, a six-lakh input. Their contribution is their own effort plus a profit, possibly more than four lakhs. What we need to consider here is that the GDP contribution is not these 10 lakhs; instead, we need to consider only these four lakhs. We only need to take four lakhs here because that is their value addition.

They have used six lakhs of input, which they used in intermediate products, generating revenue of 10 lakhs per year. In this case, what we can see is that the value added by each firm in their production, each firm's contribution to total output is equal to its value added, so in this example, suppose the 10 lakh is the revenue generated by this shop, six lakh is the inputs, and four lakh is the effort of the labor employed by this firm. The profit generated by this firm includes four lakhs, which represents their value addition, thereby contributing to the GDP. Out of this, 10 is not the GDP; the GDP contribution is only four lakhs. In that way, how can we calculate this? You can see that 10 minus 6 is the intermediate output; they use intermediate goods and services that we need to subtract.

So, the value added is the gross value of the firm's output, which is 10 lakhs minus six lakhs. Then, what we will get is four lakhs here, so it avoids double-counting. Suppose we directly say that 10 lakhs is their GDP contribution, then we are actually doing double counting. Because the firms that produce sugar, the firms that produce coffee, and the firms that produce milk will be adding this value to the revenue when they report their GDP contribution, they will be reporting this; however, when we include it here, we are double-counting. To overcome this, we are using the value-added method, which categorizes final goods—the goods that contribute to economic output, as measured by GDP.

The sum of all the values added in an economy is called gross value added; by using the product method, we calculate the gross value added here. To illustrate this further, we can explain what this value-added method entails. Suppose you buy a loaf of bread from a retail shop for 2.75, and you know that this has come from a farmer. Miller, baker, retailer, and then what is the value addition they made? So we start with the farmer.

Here, we need to assume that, out of the blue, they just contributed; they produce wheat worth \$ 0.8. In fact, they use fertilizers, pesticides, and everything else. For the time being, as a starting point, we assume it is their own contribution. Then, you know that when the miller buys from them, they give 0.8. They add yeast after grinding or making it into wheat flour; they sell it at 1.8, so their added value is one. Then the baker buys it from the miller for \$1.80 and sells it at \$2.50, adding a value of \$0.70. Then the retailer takes it from the baker at \$2.50 and sells it at \$ 2.75, making an income of \$ 0.25. As you can see, in this example, the last column indicates that when you submit the farmer's value addition, it is 0.8, the miller's contribution is 1, the baker's contribution is 0.7, and the retailer's contribution is 0.25. Ultimately, when you add this one, you will achieve a total value addition of 2.75. Yes, so the total for this one is going to be 2.75, which is the total value of this particular good.

Instead of directly measuring it from the retailer, we need to determine the value added by each economic agent in this process. The second method is called the income method, which adds together all types of factory incomes generated during the production process,

such as wages, salaries, and bonuses, which represent labor income, as well as other components payable to employees, plus interest income and profits. You can see wages, rent, interest, and profit, plus operating surplus. Operating surplus mainly means that buying firms won't distribute all the profit to the shareholders; they keep some of the profit as undistributed profit to meet the operational needs of the firm and to address unforeseen contingencies.

However, that belongs to the shareholder, so it should be considered part of their income. According to the income method, when we aggregate all factor income, including wages, rent, interest, and profit, we obtain the total revenue, which is the GDP measure through the income method. The last method is then referred to as the expenditure method. The final uses of the output are the sum of final consumption, gross capital formation, and government spending. When the income has been generated, the goods and services have been produced, and the equivalent factor income has been generated, it is then spent.

You know that the total income, when you add up all the income, equals the total consumption and savings from a household perspective. Your total income will be the sum of your consumption and savings. The savings are eventually invested in financial institutions, which lend them as loans and advances to firms, thereby becoming an investment. It means that total expenditure investment is nothing but the buying of capital goods; you also pay some amount of your income to the government as tax, and you know that it is going to be equal to government expenditure, so at the end you can see that  $y$  is equal to  $c$ . Plus  $S$  is already becoming an investment, and  $T$  has already become  $G$ .

This means that the total income you spend on the consumption of goods and services, as well as the investment expenditure on capital goods, is offset by government expenditure. Additionally, we will be buying and exporting goods and services while simultaneously importing and exporting. Also, suppose export is, for example, 10, and import is, for example, 8. Then the net export is two, which means the total income that we are actually having a surplus here, so the total expenditure side of the economy in an open economy is  $c$  plus  $i$  plus  $g$  plus  $x$  minus  $m$ , where  $c$  is household consumption expenditure,  $i$  is investment in fixed capital, and  $g$  is government consumption. Assuming the GDP is calculated using the product method, we obtain a GDP of \$ 100.

Then, using this example, the total expenditure in the country is, for example, 85, and the investment is 10, while the government expenditure is also 10. And finally, we will see the total expenditures. If the foreign sector is not considered, total expenditure consists of household expenditure ( $C$ ), firm expenditure ( $I$ ), and government expenditure ( $G$ ). Using this approach, suppose we obtain \$ 105. But using the income method and the product method, suppose we get the GDP of 100; that means the actual GDP is only 100, so we are consuming here, believe in this example, plus five not from our GDP, but from

inbound, which is not part of the GDP, because GDP means the goods and services produced within the domestic area, the domestic territory of a country.

In this case, to calculate the expenditure side of GDP, we need to subtract  $m$  from  $x$ . So, in this case, you know that exports are 10 and imports are 15, which results in minus five. We need to subtract. Suppose this one is 10 and this one is 15; then, plug all these values into this equation.  $85 + 10 + \text{government expenditure, also } 10$ , this one, all this, then you will get  $105 - 5$ , right? Therefore, you will be assigned a GDP of 100.

Using the expenditure method, you can calculate GDP in this way, which involves calculating GDP by summing consumption, investment, government expenditure, and exports minus imports. To summarize, the GDP measurement is the example I have provided here. From this example, you can see that the total expenditure calculated using this method gives us the GDP for this country. Then, you can see that practically in your mind, a question arises: suppose our income is only 100, but the GDP, when we see the total expenditure here, is 105.

Suppose the value of exports is less than imports. In that case, we must borrow from abroad or utilize our accumulated wealth over the years, such as selling gold to finance this expenditure. To summarize, in this section, we focused on how the overall economy's performance is measured using GDP. We began with the idea that GDP represents the total market value of goods and services. Newly produced final goods and services within the country during a specific period are included. To explain this concept, we use a circular flow diagram that features three economic agents.

One includes households, firms, and governments. Then we further connected with the foreign sector. We also examined the three primary approaches to calculating GDP. One is called the production method, also known as the value-added method. The second method is called the income method.

The third one is called the Expenditure Method. Each method provides different lengths for the same economic activities. And in principle, they should all yield the exact GDP figures. This foundational understanding of GDP laid the groundwork for future discussions on related topics, including inflation, business cycles, fiscal policies, and monetary policies.

Thank you for watching this video. See you in the next session.

Thank you.