GDP Formula

GDP, also known as Gross Domestic Product, is the total market value or monetary value of all the finished goods and services produced within the borders of a country, during a specific time period.

The total goods and services comprise all the government spending, net exports, investments and private expenditures.

There are three approaches to determine GDP which are

1. Expenditure Approach
2. Income Approach
3. Output Approach

Let us discuss these in brief in the following lines

Expenditure Approach

Expenditure approach calculates the GDP by calculating the sum of all the services and goods produced in an economy.

The GDP formula is mathematically represented as

$$\mathbf{Y = C + I + G + (X - M)}$$

Where

Y= Gross Domestic Product

C = Consumption

I = Investment

G = Government spending

X = Exports

M = Imports

The components are described in brief here

1. Consumption is denoted by C. It stands for all the private spending, which includes services, nondurable and durable goods.
2. Government expenditure is denoted by G and it includes employee salaries, construction of roads and railways, airports, schools and expenditures in the military.
3. Investment denoted by I, refers to all the investments which are spent on housing and equipment.
4. Net exports is denoted by (X-M) which is the difference between total imports and exports.

Income Approach

The Income approach of GDP calculation is based on the total output of a nation with the total factor income received by residents or citizens of a nation.

The formula for calculating GDP by income approach is

GDP = Compensation of employees + Rental & royalty income + Business cash flow + Net interest

Output Approach

Output approach lays emphasis on the total output of a nation by finding the value of total value of goods and services produced in a country.

The formula for calculating GDP by output approach is

GDP = GDP at market price – depreciation + NFIA (net factor income from abroad) – net indirect taxes.