CHAPTER - 1

INTRODUCTION

CONCEPT OF MICRO ECONOMICS AND MACRO ECONOMICS:

MICROECONOMICS:

Microeconomics may be defined as the branch of economic analysis which studies about the economic behavior of individual economic unit may be a person, a particular households, a particular firm and an industry. The main objective of micro economics is to explain the principles, problems and policies related to the optimum allocation of resources.

- ☑ According to K. E. Boulding, "*Microeconomics is the study of particular firm, particular households, individual price, wage, income of the industry and particular commodity."*
- ☑ According to Mc. Connel, *"In micro economics we examine the trees not the forests."*
- ☑ *Similarly according to A.P. Lerner, "Micro economics consists of looking at the economy through a microscope."*

Hence, microeconomics tries to explain how an individual allocates his income among various needs as well as how an individual maximize satisfaction level from the consumption of available limited resources. Microeconomics also explains about the process of determination of individual price with interaction of demand and supply. It helps to determine the price of the product and factor inputs. Therefore, it is also called as price theory or demand and supply theory. Simply microeconomics is microscopic study of the economy.

TYPES OF MICROECONOMICS:

1. **Micro-Statics**:

It is the economic model which studies different microeconomic variables and their relationships at a given point of time under the condition of equilibrium, other things being equal. In the micro-static models of price determination, the relationship between two market forces demand and supply determine price in the market at a point in time which is also constant through time.

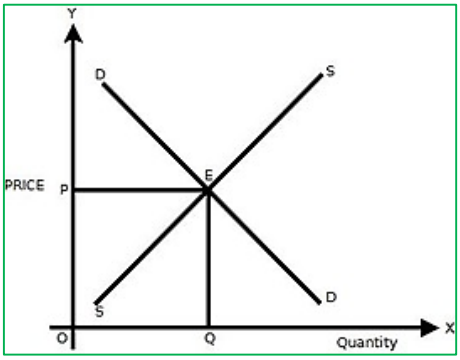


Fig. Simple Micro statics

In the figure, quantity and price are measured on X-axis and Y-axis respectively. The figure shows DD and SS the demand and supply curves respectively. The equilibrium price of a

commodity is established at a point E where quantities of demand and supplied equals to OQ at price OP. This is a static analysis of price determination, for all variables such as quantity supplied, quantity demanded and price refer to the same point or period of time.

2. Comparative Micro-Statics:

A Comparative Micro-Static analysis compares one equilibrium position with another when data have changed and system has finally reached another equilibrium position. It does not show how the system has reached the final equilibrium position with a change in data. It merely explains and compares the initial equilibrium position with the final one reached after the system has adjusted to a change in data.

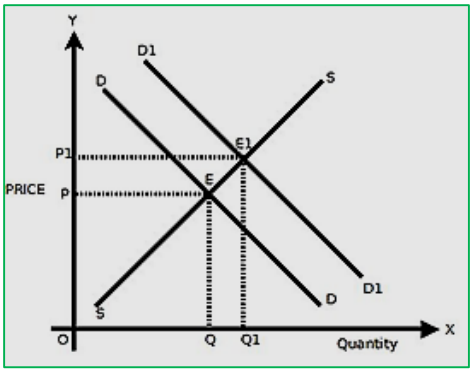


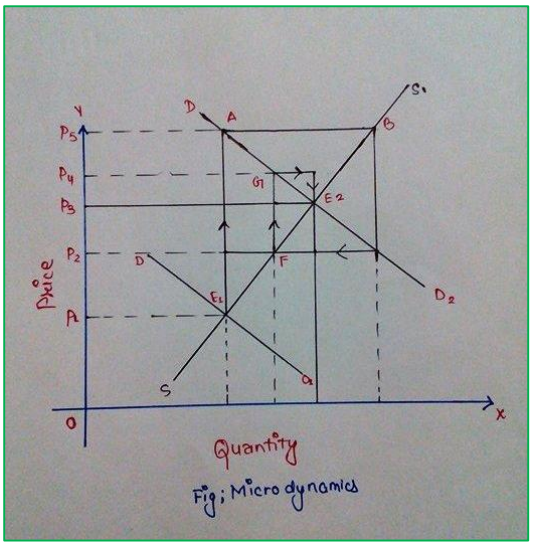
Fig. Comparative Micro statics

In the figure, quantity and price are measured on X-axis and Y-axis respectively. The initial equilibrium point between DD the demand curve and SS the supply curve is at E. When demand function shift upward to D_1D_1 due to change in some independent variable (such as income), the new equilibrium is at $E_1$where quantities of demand and supplied equals to OQ_1 at the price OP_1. In a comparative static analysis, we are concerned only with explaining the new equilibrium position at point E_1 and comparing it with E. We are not concerned with the whole path the system has travelled from E to E_1.

3. Micro Dynamics:

It explains lagged relationship between the macroeconomic variables. It throws full light on what is happening in the market during the period of transition from one static equilibrium point to another. More specifically, it studies the process through which the new equilibrium in the market is established after breaking initial equilibrium. It explains all types of changes occurred between two equilibrium. It provides answers to the following questions: What is the cause for breaking initial equilibrium or establishing new equilibrium? What types of other changes occur between two equilibriums? But it does not provide answers to the following questions: What shows initial equilibrium or new equilibrium? What is the comparative difference between them with respect to economic variables?

So, micro dynamics is the study of the process which shows how the initial equilibrium breaks and attains new equilibrium.



Fig; Micro dynamics

In the figure, the initial price of a commodity is fixed at OP1 where the quantity demanded as well as supplied is OQ1. Now due to a change in some independent variable, the demand curve DD1 shift upward to DD2. As a result, disequilibrium occurs in the market. This is followed by a series of disequilibrium before the final equilibrium until and new equilibrium price takes place. Even though demand increases, supply cannot be increased at the same movement. Therefore, the immediate effect of the upward shift in the demand curves is that the suppliers enjoy higher price P5. It is due to the fact that the supply is perfectly inelastic at a given point of time. This sharp increase in price in the market period will attract the suppliers to increase their supply in the short run. This leads to increase in the supply at the level of OQ4. It will result in a decrease in price by P5 to P2. This process is continuing until the new equilibrium is established at point E2.

MACROECONOMICS:

Macroeconomics is derived from Greek word "Makros", which means "big". Hence, macroeconomics studies not individual units but all the units combined together or the economy as a whole. Since it studies the economy in aggregate. It studies national income, national output, general price level, total employment, total savings, and total investment and so on. It is also called "aggregate economics" or the "income theory".

- ☑ According to K.E. Boulding, "Macroeconomics deals not with individual quantities but with aggregate of these quantities, not with individual incomes, but with national income, not with individual prices but with price level, not with individual output but with national output."
- ☑ According to Gardner Ackley, "Macroeconomics deals with the economic affairs in the large. It concerns the overall dimensions of economic life. It studies the character of the forest independently of trees which compose it."

Since the main objective of macroeconomics is to study the principles, problems and policies related to full employment and growth of resources. J.M. Keynes made an outstanding contribution in the development of macroeconomics. It is also known as Keynesian Phenomenon.

Types of Macroeconomics:

1. Macro statics:

It explains the total elements of the economy and their relation to the equilibrium state of the whole economy at a particular point in time. In other words, macro static economy explains the static equilibrium position of the economy.

The following equation reflects the final position of equilibrium:

Y = C + I

Where, Y = aggregate income, C = aggregate consumption and I = aggregate investment

The concept of macro statics can be further explained with the help of the following figure:

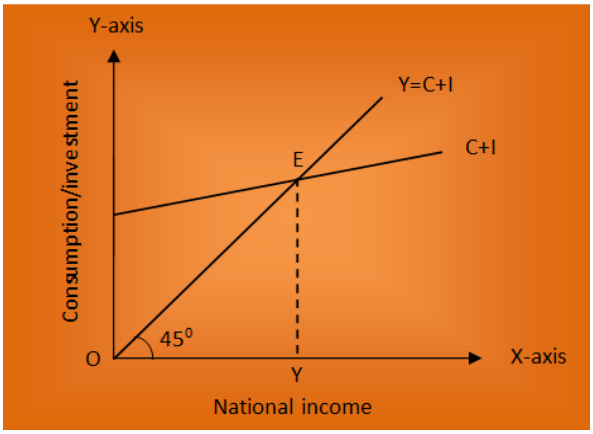


Fig: Macro Statics

In the above diagram, national income is measured along X-axis whereas consumption and investment along Y-axis. Aggregate demand curve (C+I) and aggregate supply curve (45^0 line, Y=C+I) of an economy are intersected at point E. Point E is the equilibrium point where the equilibrium level of national income is OY. As aggregate demand and aggregate supply refer to the same point of time at equilibrium point E, it is static analysis.

Consumption and investment curve (C+I) is an aggregate demand curve because the demand of all goods and services in an economy arise from either the consumption or investment made by all the individuals of that particular economy. Similarly, Y = C+I curve which refers to national income curve is aggregate supply curve. It is because, from the total supply of goods and services made by all individuals, income is generated which is called national income of an economy. Thus we can term total supply of an economy as national income.

2. Comparative Macro Statics:

Comparative macro statics is concerned with the comparative study of different equilibrium positions attained in an economy resulted by macro variables. It is concerned with the comparison of two or more successive equilibrium positions. But it tells nothing about how the system moves from one position to another.

The comparative macro static diagram can be illustrated as follows:

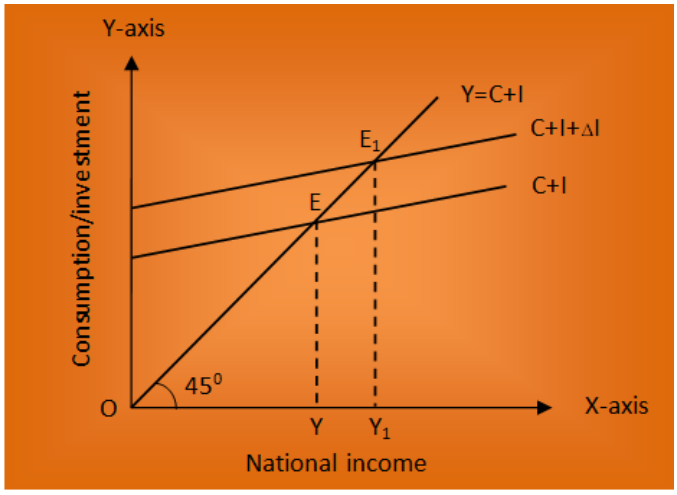


Fig: Comparative Macro Statics

In the above diagram, national income is measured along X-axis whereas consumption and investment along Y-axis. E indicates the original equilibrium point where aggregate demand curve (C+I) and aggregate supply curve (45^0 line) are intersected. OY is the equilibrium level of national income. When there is an increase in the level of investment, the aggregate demand curves shifts from C+I to C+I+ΔI. Consequently, the new equilibrium level of national income is OY_1 and the point of equilibrium is E_1. So, comparative macro statics is concerned with the comparison of these two equilibrium points E and E_1 that are obtained in an economy.

3. Macro Dynamics:

Macro dynamics analyses the process by which the economy moves from one equilibrium point to another as a result of the change in macroeconomic variables. It explains the each and every step of change involved in attaining new macroeconomic equilibrium point. Macro dynamics studies all the changes, changing path, the equilibrium position of an economy before and after the change.

Macro dynamics can be explained further with the help of the following diagram:

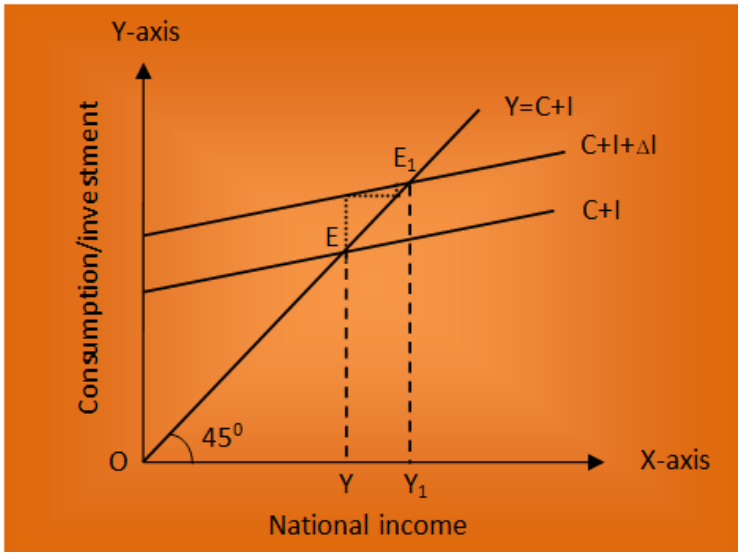


Fig: Macro Dynamics

In the above diagram, national income is measured along X-axis whereas consumption and investment along Y-axis. The original equilibrium point is E where the level of income is OY. With the increase in the level of investment i.e. ΔI, equilibrium point shifts from E to E_1 and the level of national income increases from Y to Y_1. Thus macro dynamics studies the process by which the equilibrium point shifts from point E to E_1. The process of shift of equilibrium is as: Due to increase in autonomous investment, aggregate demand increases. This increase in aggregate demand puts pressure to increase supply thereby increases national income. If this demand and supply curve reach its new equilibrium point then it is settled if not then the same process continues and the income goes on increasing till the final equilibrium point E_1 is reached. Thus macro dynamics deals with the path taken by the economy to move from point E to E_1. In the diagram the path taken is shown with the short dotted line which is in between point E and E_1.

Interdependencies between Micro-economics and Macro-economics:

Macroeconomics theory has a foundation in microeconomics theory and microeconomics theory has a foundation in macroeconomics theory. Microeconomics and Macroeconomics are just like the two sides of the same coin. We cannot analyze the individual behavior without the assuming to aggregate and likewise aggregate cannot be effective unless individual variables are kept under consideration. Microeconomics is the study of individual parts of the economy whereas macroeconomics is the study of the economy as a whole. But these two approaches are not competitive but complementary to each other.

The interdependence between these two branches of economics can be explained in following two topics:

Dependence of Microeconomics in Macroeconomics

Microeconomics matters deeply depend upon the macroeconomic activity. For example, price, rate of interest, rate of profit, wages etc. all are known as microeconomic topics. But all they depend upon macroeconomic behavior. Price, rate of interest, wage are determined by their demand and supply in country not by individual demand and supply. Same way, profit of any firm depends upon the nature of market, aggregate demand, national income, and general price level in economy. Aggregate demand, price level, national income, employment etc. are deeply affected by macroeconomic fluctuations. Thus, change in macroeconomic indicators brings the change in microeconomic activities.

Dependence of Macroeconomics in Microeconomics

Macroeconomics is overall study of microeconomic units. For example, employment of the country is the sum of all individual employment in different sectors. National income and national output is the sum of income and output of thousands of person and firms. Price level shows the average price, which comes through the appropriate calculation of prices of all transected commodities in the country in a fiscal year. Same way many theories of macroeconomics are derived from microeconomics theories. For example total consumption function and total investment function are based on the behavior of individual consumers and firms respectively. Thus, as a conclusion, it can be said that the study of macroeconomics comes throughout of microanalysis.

Being two broad branches of economics, each is paralyzed in the absence of other. P.A. Samuelson has clearly mentioned, "There is really no opposition between micro and macroeconomics. Both are absolutely vital. You are less than half educated, if you understand the one while being ignorant of the other."

Difference between Micro-economics and Macro-economics:

Microeconomics	Macroeconomics
➢ Micro is derived from Greek word 'Mikros' which means small.	➢ Macro is derived from Greek word' Makros' which means large.
➢ Microeconomics is a study of individual economic variables like demand, supply, price etc.	➢ Macroeconomics is a study of aggregate economic variables like aggregate demand, aggregate supply, price level etc.
➢ Micro economics is based on partial equilibrium analysis, other things remaining the same.	➢ Macroeconomics is based on general equilibrium analysis.
➢ Laws and principles are based on assumptions.	➢ Laws and principles are far from assumptions.
➢ Evolution of microeconomics took place earlier than macroeconomics.	➢ It evolved only after the publication of Keynes book 'The General Theory of Employment, Interest and Money'.
➢ Equilibrium is determined by market demand and supply.	➢ Equilibrium is determined by aggregate demand and supply.
➢ The main objective of Microeconomics is how to allocate scarce resources.	➢ The main objective of microeconomics is how to achieve full employment.
➢ Microeconomics is also called price theory or value theory.	➢ Macroeconomics is also called theory of income and employment or Keynesian theory.
➢ The subject matter of microeconomics is mortal because it deals with individuals. An individual will die one day.	➢ The subject matter of macroeconomics is immortal because it deals with the society as a whole and society never ends.
➢ Classical and neo-classical economists developed microeconomics.	➢ The renowned economist J.M. Keynes specially developed macroeconomics.
➢ It has very narrow scope.	➢ It has a very wide scope.

Types of Inequality:

Economic inequalities are most obviously shown by people's different positions within the economic distribution income, pay, and wealth. However, people's economic positions are also related to other characteristics, such as whether or not they have a disable, their ethnic background, or whether they are a man or a woman.

There are three main types of economic inequality:

1. Income Inequality:

Income inequality is the extent to which income is distributed unevenly in a group of people. Income is not just the money received through pay, but all the money received from employment

(wages, salaries, bonuses etc.), investments, such as interest on savings accounts and dividends from shares of stock, savings, state benefits, pensions (state, personal, company) and rent.

Measurement of income can be on an individual or household basis the incomes of all the people sharing a particular household. Household income before tax that includes money received from the social security system is known as gross income. Household income including all taxes and benefits is known as net income.

2. Pay Inequality:

A person's pay is different to their income. Pay refers to payment from employment only. This can be on an hourly, monthly or annual basis, is typically paid weekly or monthly and may also include bonuses. Pay inequality therefore describes the difference between people's pay and this may be within one company or across all pay received in the UK.

3. Wealth Inequality:

Wealth refers to the total amount of assets of an individual or household. This may include financial assets, such as bonds and stocks, property and private pension rights. Wealth inequality therefore refers to the unequal distribution of assets in a group of people.

Measurement of Inequality:

There are various ways of measuring economic inequality. The choice of measure does not change what inequality looks like dramatically. However, changes in inequality over time within individual countries can look different if different measures are used.

Commonly used measures of economic inequality:

1. Gini Coefficient:

The Gini coefficient measures inequality across the whole of society rather than simply comparing different income groups. The UK's Gini is 0.35. If all the income went to a single person (maximum inequality) and everyone else got nothing, the Gini coefficient would be equal to 1. If income was shared equally, and everyone got exactly the same, the Gini would equal 0. The lower the Gini value, the more equal a society.

Most OECD countries have a coefficient lower than 0.32 with the lowest being 0.24. The UK, a fairly unequal society, scores 0.35 and the US, an even more unequal society, 0.38. In contrast, Denmark, a much more equal society, scores 0.255. The Gini coefficient can measure inequality before or after tax and before or after housing costs. The Gini will change depending on what is measured.

2. Ratio Measures:

Ratio measures compare how much people at one level of the income distribution have compared to people at another. For instance, the 20:20 ratio compares how much richer the top 20% of people are, compared to the bottom 20%.

Common examples:

- 50/10 ratio: describes inequality between the middle and the bottom of the income distribution

- 90/10: describes inequality between the top and the bottom
- 90/50: describes inequality between the top and the middle
- 99/90: describes inequality between the very top and the top

3. Palma Ratio:

The Palma ratio is the ratio of the income share of the top 10% to that of the bottom 40%. In more equal societies this ratio will be one or below, meaning that the top 10% does not receive a larger share of national income than the bottom 40%. In very unequal societies, the ratio may be as large as 7.

The Palma ratio addresses the Gini index's over-sensitivity to changes in the middle of the distribution and insensitivity to changes at the top and bottom. The UK Palma ratio is 1.07. The Palma ratio is commonly used in international development discourse. The ratio for Brazil, for example, is 2.237.

Equilibrium:

Economic equilibrium is a state where economic forces such as supply and demand are balanced and in the absence of external influences the (equilibrium) values of economic variables will not change. For example, refers to a condition where a market price is established through competition such that the amount of goods or services bought by buyers is equal to the amount of goods or services produced by sellers. It is the point at which quantity demanded and quantities supplied are equal.

Types of Equilibrium:

1. Static Equilibrium:

According to Prof. Mehta, "Static equilibrium is that equilibrium which maintains itself outside the period of time under consideration ". It is state of bliss (complete happiness) which every individual firm, industry or factor wants to attain and once reached, would not like to leave. Consumer is in equilibrium when he gets maximum satisfaction from a given expenditure on different goods and services. Any move on this part to reallocate his expenditure among his purchases will decrease rather than increase his total satisfaction. A firm is in equilibrium when its profit is the maximum and it has no incentive to expand or contract its output. It is a position in which neither the adjusting firms have any tendency to live nor for new firms to enter the industry. In other words, an industry is in equilibrium when all firms are earning only normal profits.

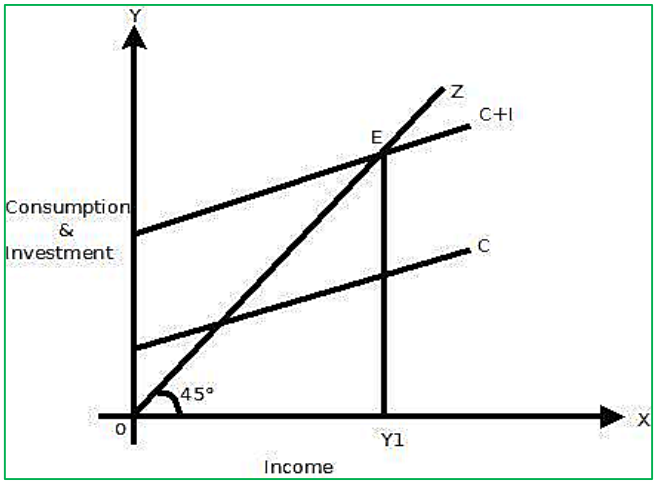
For example: The position of final equilibrium can be shown by Keynesian Equation:

$$Y = C + I$$

Where,

Y = Total Income,
C = Total consumption expenditure,
I = Total Investment expenditure

The above equation explain the relationship of three macroeconomics variables i.e. Y, C, I. The equality between Y and C+I indicates the equilibrium position. It does not involve study of time analysis.



In a static Keynesian model, the level of equilibrium is determined by the interaction of aggregate supply function and the aggregate demand function. In diagram OZ shows aggregate supply function and C + I line represents aggregate demand function. The line OZ and C + I intersect at point E, which determines equilibrium level of income at OY_1. It simply shows a timeless identity equation without any adjusting mechanism.

Static equilibrium is of three types:

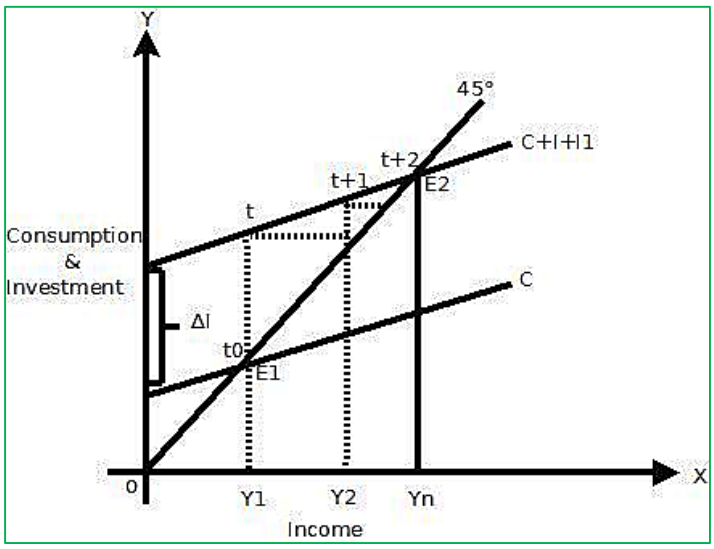
a. Micro Static
b. Macro Static
c. Comparative Static

2. Dynamic Equilibrium:

When after a fixed period the equilibrium state is disturbed it is called dynamic equilibrium. In dynamic equilibrium prices, quantities, incomes, tastes, technology etc. are constantly changing.

For example: suppose some more persons develop the taste for fish, as a result the demand for fish will increase seller will at once raise the price and thus change the behavior of the old buyers. The market will be thrown into a state of disequilibrium and will remain so till the supply of fish is increased to the level of the new demand. When new equilibrium will be brought in by the forces contenting forces.

The word dynamic means causing to move. In economics, 'dynamic' refers to the study of economic change. The essence of any knowledge lies in formulating relationships between phenomena. There must be thus sequence of events for the knowledge to be born. The main purpose is to know as to how complex of current events will shape itself In the future. To do so it is necessary to visualize the way it has itself arisen out of the past events. The moment we talk of sequence of events, the elements of time creeps into our analysis. Economics is thus a process of change through time.



The above diagram shows that C is the aggregate demand function and 45^0 degree line is the aggregate supply function. Suppose we start with the time period t_0 where with an equilibrium level of income OY_1, investment increased from I_0 to I_1, this can be seen by the new aggregate demand function line $C + I + I_1$. But in period t, consumption lags behind and it is still on the equilibrium point E_1. In next period $_{t+1}$ consumption increased with the increase in investment, which lead to increase in income from OY_1 to OY_2. This is the process of income prorogation which will continue till the aggregate demand function $C + I + I_1$ intersects the aggregate function 45^0 line at point E_2 in the nth period. The new equilibrium level of income is at OY_n. The curved steps from t_0 to E_2 show the macro-dynamic equilibrium path.

Dynamic Equilibrium Is Of Two Types:

a. Micro Dynamic Equilibrium
b. Macro Dynamic Equilibrium

Stock and Flow Ratio Variables:

1. Flow Variables:

A flow is a quantity which is measured with reference to a period of time. Thus, flows are defined with reference to a specific period (length of time) example: hours, days, weeks, months or years. It has time dimension. National income is a flow. It describes and measures flow of goods and services which become available to a country during a year.

Similarly, all other economic variables which have time dimension i.e. whose magnitude can be measured over a period of time are called flow variables. For instance, income of a person is a flow which is earned during a week or a month or any other period. Likewise, investment (i.e., addition to the stock of capital) is a flow as it pertains to a period of time.

Other examples of flows are: expenditure, savings, depreciation, interest, exports, imports, change in inventories (not mere inventories), change in money supply, lending, borrowing, rent, profit, etc. because magnitude (size) of all these are measured over a period of time.

2. Stock Variables:

A stock is a quantity which is measurable at a particular point of time, e.g., 4 p.m., 1st January, Monday, 2010, etc. Capital is a stock variable. On a particular date (say, 1st April, 2011), a country owns and commands stock of machines, buildings, accessories, raw materials, etc. It is stock of capital. Like a balance-sheet, a stock has a reference to a particular date on which it shows stock position. Clearly, a stock has no time dimension (length of time) as against a flow which has time dimension.

A flow shows change during a period of time whereas a stock indicates the quantity of a variable at a point of time. Thus, wealth is a stock since it can be measured at a point of time, but income is a flow because it can be measured over a period of time. Examples of stocks are: wealth, foreign debts, loan, inventories (not change in inventories), opening stock, money supply (amount of money), population, etc.

The distinction between flows and stocks can be easily understood by comparing the actions of Still Camera (which records position at a point of time) with that of Video Camera (which records position during a period of time).