UNIT 1

MACRO ECONOMICS-

Definition: Macroeconomics is the branch of economics that studies the behavior and performance of an economy as a whole. It focuses on the aggregate changes in the economy such as unemployment, growth rate, gross domestic product and inflation.

Differences Between Micro And Macro Economics-

- Microeconomics studies the particular market segment of the economy, whereas Macroeconomics studies the whole economy that covers several market segments.
- Micro economics stresses on individual economic units. As against this, the focus of macro economics is on aggregate economic variables.
- While microeconomics is applied to operational or internal issues, environmental and external issues are the concern of macro economics.
- Microeconomics deals with an individual product, firm, household, industry, wages, prices, etc., while Macroeconomics deals with aggregates like national income, national output, price level, etc.
- Microeconomics covers issues like how the price of a particular commodity will affect its quantity demanded and quantity supplied and vice versa while Macroeconomics covers major issues of an economy like unemployment, monetary/ fiscal policies, poverty, international trade, etc.
- Microeconomics determine the price of a particular commodity along with the prices of complementary and the substitute goods, whereas the Macroeconomics is helpful in maintaining the general price level.
- while analyzing any economy, micro economics takes a bottom-up approach, whereas the macroeconomics takes a top-down approach into consideration.

Relationship between micro and macro economics

As microeconomics focuses on the allocation of limited resources among the individuals, the macro economics examines that how the distribution of limited resources is to be done among many people, so that it will make the best possible use of the scarce resources. As micro economics studies about the individual units, at the same time, macro economics studies about the aggregate variables. In this way, we can say that they are interdependent.

Importance Of Macroeconomics

- It helps us understand the functioning of a complicated modern economic system. It describes how the economy as a whole functions and how the level of national income and employment is determined on the basis of aggregate demand and aggregate supply.
- It helps to achieve the goal of economic growth, a higher GDP level, and higher level of employment. It analyses the forces which determine economic growth of a country and explains how to reach the highest state of economic growth and sustain it.
- It helps to bring stability in price level and analyses fluctuations in business activities. It suggests policy measures to control inflation and deflation.
- It explains factors which determine balance of payments. At the same time, it identifies causes of deficit in balance of payments and suggests remedial measures.
- It helps to solve economic problems like poverty, unemployment, inflation, deflation etc., whose solution is possible at macro level only (in other words, at the level of the whole economy).
- With a detailed knowledge of the functioning of an economy at macro level, it has been possible to formulate correct economic policies and also coordinate international economic policies.
- Last but not least, macroeconomic theory has saved us from the dangers of application of microeconomic theory to the problems that require us to look at the economy as a whole.

Limitations of macroeconomics

1. **Fallacy of Composition-** In Macro economic analysis the fallacy of composition is involved, i.e. aggregate economic behaviour is the sum total of the economy of individual activities. But what is true of individuals is not necessarily true to the fiscal entirely. For instance, savings are a private virtue but a public vice. If total savings in the economy increases, they may initiate a depression unless they are invested. Again, if an individual depositor withdraws his money from the bank, there is no risk. But if all depositors simultaneously do this, there will be a run on the banks and the banking system will be affected adversely.
2. **To Regard the Aggregates as Homogenous-** The main defect in macro analysis is that it regards the aggregates as homogenous without caring about their internal composition and structure. The average wage in a nation is the sum total of wages in all professions, i.e. wages of clerks, typists, teachers, nurses etc. But the volume of aggregate employment depends on the relative structure of wages rather than on the average wage. If, for instance, wages of nurses increase but of typist rises much aggregate employment would increase.
3. **Aggregate Variables may not be Important Necessarily-** The aggregate variables which form the economic system may not be of much significance. For instance, the

national income of a country is the total of all individual income. A hike in national income does not mean that individual incomes have risen. The increase in national income might be the result of the increase in the incomes of a few rich people in the nation. Thus a rise in the national income of this type has little significance from the point of view of the community.

4. **Indiscriminate Use of Macro Economics Misleading-** An indiscriminate and uncritical use of macro economics in analyzing the complexities of the real world can frequently be misleading. For instance, if the policy measures needed to achieve and maintain full employment in the economy are applied to structural redundancy in individual firms and industries, they become irrelevant. Likewise, measures aimed at controlling general prices cannot be applied with much advantage for controlling prices of individual products.
5. **Statistical and Conceptual Difficulties-** The measurement of macro economics concepts involves a number of statistical and conceptual complexities. These problems relate to the aggregation of micro economic variables. If individual units are almost similar, aggregation does not present much difficulty. But if micro economic variables relate to dissimilar individual units, their aggregation into one aggregation into one macroeconomic variable may be incorrect and hazardous.

MACROECONOMIC VARIABLES-

GDP- Gross Domestic Product- The GDP equals the total value of goods and services produced in a country during a year. Economic growth is, therefore, a sustainable increase in the amount of goods and services produced in an economy over time. However economic growth is different from economic development.

Unemployment Rate- The second most important macro-economic concept is the unemployment rate, which is a key indicator of the condition of the labor market. The unemployment rate is defined as the percentage of people willing to be employed at the prevailing wage rate, yet unable to find job opportunities. When the unemployment rate is high, work is not only hard to find, but also less rewarding as people already holding jobs might find it difficult to get wage increases or promotions. A low unemployment rate is an indication of good economic performance. Thus, keeping workers employed is always a chief concern of economic policymakers.

Inflation- The third most important macroeconomic concept is inflation, which is an increase in the overall level of prices measured by the consumer price index. This index shows how the value of money changes over time. Inflation is one of the primary concerns of economists and policymakers because it imposes a variety of costs on the economy. When the inflation rate is high, the real value of money erodes. People on fixed incomes, such as pensioners who receive a fixed dollar payment each month, cannot keep up with the rising cost of living. Inflation also redistributes wealth among the population in a way that has nothing to do with merit. When there is a sustained period of

inflationary pressure, lenders and workers lose while borrowers and employers benefit because many work and loan contracts in the economy are specified in terms of money. Another cost of inflation is that it discourages saving. The income tax treats the nominal interest earned on savings as income, even though part of the nominal interest rate merely compensates for inflation. This reduces the after-tax real interest rate, and hence makes saving less attractive.

International Trade- Another major macroeconomic topic is international trade, which is the exchange of goods and services across international borders. Because modern economies are highly interdependent, macroeconomists often study the impact and desirability of free trade agreements. They also study the causes and effects of trade imbalances, which occur when the quantity of goods and services that a country sells abroad (its exports) differs significantly from the quantity of goods and services its citizens buy from abroad (its imports).

Tools for macroeconomic policy

Macroeconomic policy is concerned with the operation of the economy as a whole. In broad terms, the goal of macroeconomic policy is to provide a stable economic environment that is conducive to fostering strong and sustainable economic growth, on which the creation of jobs, wealth and improved living standards depend. The key pillars of macroeconomic policy are: fiscal policy, monetary policy and exchange rate policy. This brief outlines the nature of each of these policy instruments and the different ways they can help promote stable and sustainable growth.

Fiscal policy - Fiscal policy operates through changes in the level and composition of government spending, the level and types of taxes levied and the level and form of government borrowing. Governments can directly influence economic activity through recurrent and capital expenditure, and indirectly, through the effects of spending, taxes and transfers on private consumption, investment and net exports. Under current institutional arrangements, fiscal policy is the only arm of macroeconomic policy directly controlled by government. As an instrument for stabilizing fluctuations in economic activity, fiscal policy can reflect discretionary actions by government or the influence of the automatic stabilizers. A fiscal stimulus package is an example of discretionary action by government intended to support aggregate demand by increasing public spending and/or cutting taxes. The automatic stabilizers refer to certain types of government spending and revenue that are sensitive to changes in economic activity, and to the size and inertia of government more generally. They have a stabilizing effect on fluctuations in aggregate demand and operate without requiring any specific actions by government. For example, if the economy slows, on the revenue side of the budget the amount of tax collected declines because corporate profits and taxpayers incomes fall; on the expenditure side, unemployment benefits and other social spending increases. The effects of these changes tend to offset part of the decline in aggregate demand that would otherwise occur. This cyclical

sensitivity makes fiscal policy automatically expansionary during downturns and contractionary during upturns in economic activity. At least conceptually, the operation of the automatic stabilizers over the economic cycle should have no effect on the underlying structural position of the budget. A short-term cyclical deterioration in the budget bottom line should be reversed as economic conditions improve. As well as having a short-term stabilization role, fiscal policy can also be framed against longer-term objectives. This can include ensuring the long-term sustainability of the budget and its capacity to meet future challenges, such as population ageing, and seeking to increase the long-term growth potential of the economy, through investments in areas such as infrastructure and education.

Monetary policy- Monetary policy decisions are implemented by changing the cash rate (the interest rate on overnight loans in the money market). The cash rate is determined in the money market by the forces of supply and demand for overnight funds. Through open market operations the RBI can target the cash rate by increasing or decreasing the supply of funds that banks use to settle transactions among themselves. By changing the cash rate the RBI is able to influence interest rates across the financial system. Changes in interest rates in turn can influence economic activity by affecting savings and investment behavior, household expenditure, the supply of credit, asset prices and the exchange rate.

Exchange rate policy- Exchange rate policy is concerned with how the value of the domestic currency, relative to other currencies, is determined.

Introduction:

National income is an uncertain term which is used interchangeably with national dividend, national output and national expenditure. On this basis, national income has been defined in a number of ways. In common parlance, national income means the total value of goods and services produced annually in a country.

1. Definitions of National Income:

The definitions of national income can be grouped into two classes: One, the traditional definitions advanced by Marshall, Pigou and Fisher; and two, modern definitions.

The Marshallian Definition:

According to Marshall: "The labour and capital of a country acting on its natural resources produce annually a certain net aggregate of commodities, material and immaterial including services of all kinds. This is the true net annual income or revenue of the country or national dividend." In this definition, the word 'net' refers to deductions from the gross national income

in respect of depreciation and wearing out of machines. And to this, must be added income from abroad.

It's Defects:

Though the definition advanced by Marshall is simple and comprehensive, yet it suffers from a number of limitations. First, in the present day world, so varied and numerous are the goods and services produced that it is very difficult to have a correct estimation of them.

Consequently, the national income cannot be calculated correctly. Second, there always exists the fear of the mistake of double counting, and hence the national income cannot be correctly estimated. Double counting means that a particular commodity or service like raw material or labour, etc. might get included in the national income twice or more than twice.

For example, a peasant sells wheat worth Rs.2000 to a flour mill which sells wheat flour to the wholesaler and the wholesaler sells it to the retailer who, in turn, sells it to the customers. If each time, this wheat or its flour is taken into consideration, it will work out to Rs.8000, whereas, in actuality, there is only an increase of Rs.2000 in the national income.

Third, it is again not possible to have a correct estimation of national income because many of the commodities produced are not marketed and the producer either keeps the produce for self-consumption or exchanges it for other commodities. It generally happens in an agriculture-oriented country like India. Thus the volume of national income is underestimated.

The Pigouvian Definition:

A.C. Pigou has in his definition of national income included that income which can be measured in terms of money. In the words of Pigou, "National income is that part of objective income of the community, including of course income derived from abroad which can be measured in money."

This definition is better than the Marshallian definition. It has proved to be more practical also. While calculating the national income now-a- days, estimates are prepared in accordance with the two criteria laid down in this definition.

First, avoiding double counting, the goods and services which can be measured in money are included in national income. Second, income received on account of investment in foreign countries is included in national income.

It's Defects:

The Pigouvian definition is precise, simple and practical but it is not free from criticism. First, in the light of the definition put forth by Pigou, we have to unnecessarily differentiate between commodities which can and which cannot be exchanged for money.

But, in actuality, there is no difference in the fundamental forms of such commodities, no matter they can be exchanged for money. Second, according to this definition when only such commodities as can be exchanged for money are included in estimation of national income, the national income cannot be correctly measured.

According to Pigou, a woman's services as a nurse would be included in national income but excluded when she worked in the home to look after her children because she did not receive any salary for it. Similarly, Pigou is of the view that if a man marries his lady secretary, the national income diminishes as he has no longer to pay for her services.

Thus the Pigovian definition gives rise to a number of paradoxes. Third, the Pigovian definition is applicable only to the developed countries where goods and services are exchanged for money in the market.

According to this definition, in the backward and underdeveloped countries of the world, where a major portion of the produce is simply bartered, correct estimate of national income will not be possible, because it will always work out less than the real level of income. Thus the definition advanced by Pigou has a limited scope.

Fisher's Definition:

Fisher adopted 'consumption' as the criterion of national income whereas Marshall and Pigou regarded it to be production. According to Fisher, "The National dividend or income consists solely of services as received by ultimate consumers, whether from their material or from the human environments. Thus, a piano, or an overcoat made for me this year is not a part of this year's income, but an addition to the capital. Only the services rendered to me during this year by these things are income."

Fisher's definition is considered to be better than that of Marshall or Pigou, because Fisher's definition provides an adequate concept of economic welfare which is dependent on consumption and consumption represents our standard of living.

It's Defects:

But from the practical point of view, this definition is less useful, because there are certain difficulties in measuring the goods and services in terms of money. First, it is more difficult to estimate the money value of net consumption than that of net production.

In one country there are several individuals who consume a particular good and that too at different places and, therefore, it is very difficult to estimate their total consumption in terms of money. Second, certain consumption goods are durable and last for many years.

If we consider the example of piano or overcoat, as given by Fisher, only the services rendered for use during one year by them will be included in income. If an overcoat costs Rs. 100 and lasts for ten years, Fisher will take into account only Rs. 100 as national income during one year, whereas Marshall and Pigou will include Rs. 100 in the national income for the year, when it is made.

Besides, it cannot be said with certainty that the overcoat will last only for ten years. It may last longer or for a shorter period. Third, the durable goods generally keep changing hands leading to a change in their ownership and value too.

It, therefore, becomes difficult to measure in money the service-value of these goods from the point of view of consumption. For instance, the owner of a Maruti car sells it at a price higher than its real price and the purchaser after using it for a number of years further sells it at its actual price.

Now the question is as to which of its price, whether actual or black market one, should we take into account, and afterwards when it is transferred from one person to another, which of its value according to its average age should be included in national income?

But the definitions advanced by Marshall, Pigou and Fisher are not altogether flawless. However, the Marshallian and Pigovian definitions tell us of the reasons influencing economic welfare, whereas Fisher's definition helps us compare economic welfare in different years.

Modern Definitions:

From the modern point of view, Simon Kuznets has defined national income as "the net output of commodities and services flowing during the year from the country's productive system in the hands of the ultimate consumers."

On the other hand, in one of the reports of United Nations, national income has been defined on the basis of the systems of estimating national income, as net national product, as addition to the shares of different factors, and as net national expenditure in a country in a year's time. In practice, while estimating national income, any of these three definitions may be adopted, because the same national income would be derived, if different items were correctly included in the estimate.

2. Concepts of National Income:

There are a number of concepts pertaining to national income and methods of measurement relating to them.

(A) Gross Domestic Product (GDP):

GDP is the total value of goods and services produced within the country during a year. This is calculated at market prices and is known as GDP at market prices. Dernberg defines GDP at market price as "the market value of the output of final goods and services produced in the domestic territory of a country during an accounting year."

There are three different ways to measure GDP:

Product Method, Income Method and Expenditure Method.

These three methods of calculating GDP yield the same result because

National Product = National Income = National Expenditure.

1. The Product Method:

In this method, the value of all goods and services produced in different industries during the year is added up. This is also known as the value added method to GDP or GDP at factor cost by industry of origin. The following items are included in India in this: agriculture and allied services; mining; manufacturing, construction, electricity, gas and water supply; transport, communication and trade; banking and insurance, real estates and ownership of dwellings and business services; and public administration and defense and other services (or government services). In other words, it is the sum of gross value added.

2. The Income Method:

The people of a country who produce GDP during a year receive incomes from their work. Thus GDP by income method is the sum of all factor incomes: Wages and Salaries (compensation of employees) + Rent + Interest + Profit.

3. Expenditure Method:

This method focuses on goods and services produced within the country during one year.

GDP by expenditure method includes:

(1) Consumer expenditure on services and durable and non-durable goods (C),

(2) Investment in fixed capital such as residential and non-residential building, machinery, and inventories (I),

(3) Government expenditure on final goods and services (G),

(4) Export of goods and services produced by the people of country (X),

(5) Less imports (M). That part of consumption, investment and government expenditure which is spent on imports is subtracted from GDP. Similarly, any imported component, such as raw materials, which is used in the manufacture of export goods, is also excluded.

Thus GDP by expenditure method at market prices = C+ I + G + (X – M), where (X-M) is net export which can be positive or negative.

(B) GDP at Factor Cost:

GDP at factor cost is the sum of net value added by all producers within the country. Since the net value added gets distributed as income to the owners of factors of production, GDP is the sum of domestic factor incomes and fixed capital consumption (or depreciation).

Thus GDP at Factor Cost = Net value added + Depreciation.

GDP at factor cost includes:

(i) Compensation of employees i.e., wages, salaries, etc.

(ii) Operating surplus which is the business profit of both incorporated and unincorporated firms. [Operating Surplus = Gross Value Added at Factor Cost—Compensation of Employees—Depreciation]

(iii) Mixed Income of Self- employed.

Conceptually, GDP at factor cost and GDP at market price must be identical/This is because the factor cost (payments to factors) of producing goods must equal the final value of goods and services at market prices. However, the market value of goods and services is different from the earnings of the factors of production.

In GDP at market price are included indirect taxes and are excluded subsidies by the government. Therefore, in order to arrive at GDP at factor cost, indirect taxes are subtracted and subsidies are added to GDP at market price.

Thus, GDP at Factor Cost = GDP at Market Price – Indirect Taxes + Subsidies.

(C) Net Domestic Product (NDP):

NDP is the value of net output of the economy during the year. Some of the country's capital equipment wears out or becomes obsolete each year during the production process. The value of this capital consumption is some percentage of gross investment which is deducted from GDP. Thus Net Domestic Product = GDP at Factor Cost – Depreciation.

(D) Nominal and Real GDP:

When GDP is measured on the basis of current price, it is called GDP at current prices or nominal GDP. On the other hand, when GDP is calculated on the basis of fixed prices in some year, it is called GDP at constant prices or real GDP.

Nominal GDP is the value of goods and services produced in a year and measured in terms of rupees (money) at current (market) prices. In comparing one year with another, we are faced with the problem that the rupee is not a stable measure of purchasing power. GDP may rise a great deal in a year, not because the economy has been growing rapidly but because of rise in prices (or inflation).

On the contrary, GDP may increase as a result of fall in prices in a year but actually it may be less as compared to the last year. In both 5 cases, GDP does not show the real state of the economy. To rectify the underestimation and overestimation of GDP, we need a measure that adjusts for rising and falling prices.

This can be done by measuring GDP at constant prices which is called real GDP. To find out the real GDP, a base year is chosen when the general price level is normal, i.e., it is neither too high nor too low. The prices are set to 100 (or 1) in the base year.

Now the general price level of the year for which real GDP is to be calculated is related to the base year on the basis of the following formula which is called the deflator index:

$$\text{Real } GDP = \frac{\text{GDP for the Current Year}}{} \times \frac{\text{Base Year (=100)}}{\text{Current Year Index}}$$

Suppose 1990-91 is the base year and GDP for 1999-2000 is Rs. 6, 00,000 crores and the price index for this year is 300.

Thus, Real GDP for 1999-2000 = Rs. 6, 00,000 x 100/300 = Rs. 2, 00,000 crores

(E) GDP Deflator:

GDP deflator is an index of price changes of goods and services included in GDP. It is a price index which is calculated by dividing the nominal GDP in a given year by the real GDP for the same year and multiplying it by 100. Thus,

$$GDP \text{ Deflator} = \frac{\text{Nominal (or Current Prices) } GDP}{\text{Real (or Constant Prices) } GDP} \times 100$$

$$\text{For example, GDP Deflator in 1997-98} = \frac{1426.7\text{th. crores}}{1049.2\text{th. crores at}} \times 100 = 135.9$$

It shows that at constant prices (1993-94), GDP in 1997-98 increased by 135.9% due to inflation (or rise in prices) from Rs. 1049.2 thousand crores in 1993-94 to Rs. 1426.7 thousand crores in 1997-98.

(F) Gross National Product (GNP):

GNP is the total measure of the flow of goods and services at market value resulting from current production during a year in a country, including net income from abroad.

GNP includes four types of final goods and services:

(1) Consumers' goods and services to satisfy the immediate wants of the people;

(2) Gross private domestic investment in capital goods consisting of fixed capital formation, residential construction and inventories of finished and unfinished goods;

(3) Goods and services produced by the government; and

(4) Net exports of goods and services, i.e., the difference between value of exports and imports of goods and services, known as net income from abroad.

In this concept of GNP, there are certain factors that have to be taken into consideration: First, GNP is the measure of money, in which all kinds of goods and services produced in a country during one year are measured in terms of money at current prices and then added together.

But in this manner, due to an increase or decrease in the prices, the GNP shows a rise or decline, which may not be real. To guard against erring on this account, a particular year (say for instance 1990-91) when prices be normal, is taken as the base year and the GNP is adjusted in accordance with the index number for that year. This will be known as GNP at 1990-91 prices or at constant prices.

Second, in estimating GNP of the economy, the market price of only the final products should be taken into account. Many of the products pass through a number of stages before they are ultimately purchased by consumers.

If those products were counted at every stage, they would be included many a time in the national product. Consequently, the GNP would increase too much. To avoid double counting, therefore, only the final products and not the intermediary goods should be taken into account.

Third, goods and services rendered free of charge are not included in the GNP, because it is not possible to have a correct estimate of their market price. For example, the bringing up of a child by the mother, imparting instructions to his son by a teacher, recitals to his friends by a musician, etc.

Fourth, the transactions which do not arise from the produce of current year or which do not contribute in any way to production are not included in the GNP. The sale and purchase of old goods, and of shares, bonds and assets of existing companies are not included in GNP because these do not make any addition to the national product, and the goods are simply transferred.

Fifth, the payments received under social security, e.g., unemployment insurance allowance, old age pension, and interest on public loans are also not included in GNP, because the recipients do not provide any service in lieu of them. But the depreciation of machines, plants and other capital goods is not deducted from GNP.

Sixth, the profits earned or losses incurred on account of changes in capital assets as a result of fluctuations in market prices are not included in the GNP if they are not responsible for current production or economic activity.

For example, if the price of a house or a piece of land increases due to inflation, the profit earned by selling it will not be a part of GNP. But if, during the current year, a portion of a house is constructed anew, the increase in the value of the house (after subtracting the cost of the newly constructed portion) will be included in the GNP. Similarly, variations in the value of assets, that can be ascertained beforehand and are insured against flood or fire, are not included in the GNP.

Last, the income earned through illegal activities is not included in the GNP. Although the goods sold in the black market are priced and fulfill the needs of the people, but as they are not useful

from the social point of view, the income received from their sale and purchase is always excluded from the GNP.

There are two main reasons for this. One, it is not known whether these things were produced during the current year or the preceding years. Two, many of these goods are foreign made and smuggled and hence not included in the GNP.

Three Approaches to GNP:

After having studied the fundamental constituents of GNP, it is essential to know how it is estimated. Three approaches are employed for this purpose. One, the income method to GNP; two, the expenditure method to GNP and three, the value added method to GNP. Since gross income equals gross expenditure, GNP estimated by all these methods would be the same with appropriate adjustments.

1. Income Method to GNP:

The income method to GNP consists of the remuneration paid in terms of money to the factors of production annually in a country.

Thus GNP is the sum total of the following items:

(i) Wages and salaries:

Under this head are included all forms of wages and salaries earned through productive activities by workers and entrepreneurs. It includes all sums received or deposited during a year by way of all types of contributions like overtime, commission, provident fund, insurance, etc.

(ii) Rents:

Total rent includes the rents of land, shop, house, factory, etc. and the estimated rents of all such assets as are used by the owners themselves.

(iii) Interest:

Under interest comes the income by way of interest received by the individual of a country from different sources. To this is added, the estimated interest on that private capital which is invested and not borrowed by the businessman in his personal business. But the interest received on governmental loans has to be excluded, because it is a mere transfer of national income.

(iv) Dividends:

Dividends earned by the shareholders from companies are included in the GNP.

(v) Undistributed corporate profits:

Profits which are not distributed by companies and are retained by them are included in the GNP.

(vi) Mixed incomes:

These include profits of unincorporated business, self-employed persons and partnerships. They form part of GNP.

(vii) Direct taxes:

Taxes levied on individuals, corporations and other businesses are included in the GNP.

(viii) Indirect taxes:

The government levies a number of indirect taxes, like excise duties and sales tax.

These taxes are included in the price of commodities. But revenue from these goes to the government treasury and not to the factors of production. Therefore, the income due to such taxes is added to the GNP.

(ix) Depreciation:

Every corporation makes allowance for expenditure on wearing out and depreciation of machines, plants and other capital equipment. Since this sum also is not a part of the income received by the factors of production, it is, therefore, also included in the GNP.

(x) Net income earned from abroad:

This is the difference between the value of exports of goods and services and the value of imports of goods and services. If this difference is positive, it is added to the GNP and if it is negative, it is deducted from the GNP.

Thus GNP according to the Income Method = Wages and Salaries + Rents + Interest + Dividends + Undistributed Corporate Profits + Mixed Income + Direct Taxes + Indirect Taxes + Depreciation + Net Income from abroad.

2. Expenditure Method to GNP:

From the expenditure view point, GNP is the sum total of expenditure incurred on goods and services during one year in a country.

It includes the following items:

(i) Private consumption expenditure:

It includes all types of expenditure on personal consumption by the individuals of a country. It comprises expenses on durable goods like watch, bicycle, radio, etc., expenditure on single-used consumers' goods like milk, bread, ghee, clothes, etc., as also the expenditure incurred on services of all kinds like fees for school, doctor, lawyer and transport. All these are taken as final goods.

(ii) Gross domestic private investment:

Under this comes the expenditure incurred by private enterprise on new investment and on replacement of old capital. It includes expenditure on house construction, factory- buildings, and all types of machinery, plants and capital equipment.

In particular, the increase or decrease in inventory is added to or subtracted from it. The inventory includes produced but unsold manufactured and semi-manufactured goods during the year and the stocks of raw materials, which have to be accounted for in GNP. It does not take into account the financial exchange of shares and stocks because their sale and purchase is not real investment. But depreciation is added.

(iii) Net foreign investment:

It means the difference between exports and imports or export surplus. Every country exports to or imports from certain foreign countries. The imported goods are not produced within the country and hence cannot be included in national income, but the exported goods are manufactured within the country. Therefore, the difference of value between exports (X) and imports (M), whether positive or negative, is included in the GNP.

(iv) Government expenditure on goods and services:

The expenditure incurred by the government on goods and services is a part of the GNP. Central, state or local governments spend a lot on their employees, police and army. To run the offices, the governments have also to spend on contingencies which include paper, pen, pencil and various types of stationery, cloth, furniture, cars, etc.

It also includes the expenditure on government enterprises. But expenditure on transfer payments is not added, because these payments are not made in exchange for goods and services produced during the current year.

Thus GNP according to the Expenditure Method=Private Consumption Expenditure (C) + Gross Domestic Private Investment (I) + Net Foreign Investment (X-M) + Government Expenditure on Goods and Services (G) = C+ I + (X-M) + G.

As already pointed out above, GNP estimated by either the income or the expenditure method would work out to be the same, if all the items are correctly calculated.

3. Value Added Method to GNP:

Another method of measuring GNP is by value added. In calculating GNP, the money value of final goods and services produced at current prices during a year is taken into account. This is one of the ways to avoid double counting. But it is difficult to distinguish properly between a final product and an intermediate product.

For instance, raw materials, semi-finished products, fuels and services, etc. are sold as inputs by one industry to the other. They may be final goods for one industry and intermediate for others. So, to avoid duplication, the value of intermediate products used in manufacturing final products must be subtracted from the value of total output of each industry in the economy.

Thus, the difference between the value of material outputs and inputs at each stage of production is called the value added. If all such differences are added up for all industries in the economy, we arrive at the GNP by value added. GNP by value added = Gross value added + net income from abroad. Its calculation is shown in Tables 1, 2 and 3.

Table 1 is constructed on the supposition that the entire economy for purposes of total production consists of three sectors. They are agriculture, manufacturing, and others, consisting of the tertiary sector.

Out of the value of total output of each sector is deducted the value of its intermediate purchases (or primary inputs) to arrive at the value added for the entire economy. Thus the value of total output of the entire economy as per Table 1, is Rs. 155 crores and the value of its primary inputs comes to Rs. 80 crores. Thus the GDP by value added is Rs. 75 crores (Rs. 155 minus Rs. 80 crores).

TABLE 1 : GDP BY VALUE ADDED

(Rs. crores)

Industry	Total Output	Intermediate Purchases	Value Added
(1)	(2)	(3)	(4)=(2-3)
1. Agriculture	30	10	20
2. Manufacturing	70	45	25
3. Others	55	25	30
Total	155	80	75

The total value added equals the value of gross domestic product of the economy. Out of this value added, the major portion goes in the form wages and salaries, rent, interest and profits, a small portion goes to the government as indirect taxes and the remaining amount is meant for depreciation. This is shown in Table 3.

Thus we find that the total gross value added of an economy equals the value of its gross domestic product. If depreciation is deducted from the gross value added, we have net value added which comes to Rs. 67 crores (Rs. 75 minus Rs. 8 crores).

This is nothing but net domestic product at market prices. Again, if indirect taxes (Rs. 7 crores) are deducted from the net domestic product of Rs. 67 crores, we get Rs. 60 crores as the net value added at factor cost which is equivalent to net domestic product at factor cost. This is illustrated in Table 2.

TABLE 2
VALUE ADDED AT FACTOR COST

		(Rs. Crores)
1.	Market Value of output	155
2.	*Less:* cost of intermediate Goods	80
3.	Gross value added	75
4.	*Less:* depreciation	8
5.	Net value added or domestic product at market prices	67
6.	*Less:* indirect taxes	7
7.	Net value added at factor cost	60

Net value added at factor cost is equal to the net domestic product at factor cost, as given by the total of items 1 to 4 of Table 2 (Rs. 45+3+4+8 crores=Rs. 60 crores). By adding indirect taxes (Rs 7 crores) and depreciation (Rs 8 crores), we get gross value added or GDP which comes to Rs 75 crores.

If we add net income received from abroad to the gross value added, this gives -us, gross national income. Suppose net income from abroad is Rs. 5 crores. Then the gross national income is Rs. 80 crores (Rs. 75 crores + Rs. 5 crores) as shown in Table 3.

TABLE 3 : GROSS DOMESTIC PRODUCT

		(Rs Crores)
1.	Wages and salaries	45
2.	Income from rent	3
3.	Net interest	4
4.	Profits of companies	8
	Net Value Added or NDP	60
5.	Indirect taxes	+7
6.	Depreciation	+8
	Gross Value Added or GDP	75
7.	Net income from abroad	+5
	Gross National Income	80

It's Importance:

The value added method for measuring national income is more realistic than the product and income methods because it avoids the problem of double counting by excluding the value of

intermediate products. Thus this method establishes the importance of intermediate products in the national economy. Second, by studying the national income accounts relating to value added, the contribution of each production sector to the value of the GNP can be found out.

For instance, it can tell us whether agriculture is contributing more or the share of manufacturing is falling, or of the tertiary sector is increasing in the current year as compared to some previous years. Third, this method is highly useful because "it provides a means of checking the GNP estimates obtained by summing the various types of commodity purchases."

It's Difficulties:

However, difficulties arise in the calculation of value added in the case of certain public services like police, military, health, education, etc. which cannot be estimated accurately in money terms. Similarly, it is difficult to estimate the contribution made to value added by profits earned on irrigation and power projects.

(G) GNP at Market Prices:

When we multiply the total output produced in one year by their market prices prevalent during that year in a country, we get the Gross National Product at market prices. Thus GNP at market prices means the gross value of final goods and services produced annually in a country plus net income from abroad. It includes the gross value of output of all items from (1) to (4) mentioned under GNP. GNP at Market Prices = GDP at Market Prices + Net Income from Abroad.

(H) GNP at Factor Cost:

GNP at factor cost is the sum of the money value of the income produced by and accruing to the various factors of production in one year in a country. It includes all items mentioned above under income method to GNP less indirect taxes.

GNP at market prices always includes indirect taxes levied by the government on goods which raise their prices. But GNP at factor cost is the income which the factors of production receive in return for their services alone. It is the cost of production.

Thus GNP at market prices is always higher than GNP at factor cost. Therefore, in order to arrive at GNP at factor cost, we deduct indirect taxes from GNP at market prices. Again, it often happens that the cost of production of a commodity to the producer is higher than a price of a similar commodity in the market.

In order to protect such producers, the government helps them by granting monetary help in the form of a subsidy equal to the difference between the market price and the cost of production of the commodity. As a result, the price of the commodity to the producer is reduced and equals the market price of similar commodity.

For example if the market price of rice is Rs. 3 per kg but it costs the producers in certain areas Rs. 3.50. The government gives a subsidy of 50 paisa per kg to them in order to meet their cost of production. Thus in order to arrive at GNP at factor cost, subsidies are added to GNP at market prices.

GNP at Factor Cost = GNP at Market Prices – Indirect Taxes + Subsidies.

(I) Net National Product (NNP):

NNP includes the value of total output of consumption goods and investment goods. But the process of production uses up a certain amount of fixed capital. Some fixed equipment wears out, its other components are damaged or destroyed, and still others are rendered obsolete through technological changes.

All this process is termed depreciation or capital consumption allowance. In order to arrive at NNP, we deduct depreciation from GNP. The word 'net' refers to the exclusion of that part of total output which represents depreciation. So NNP = GNP—Depreciation.

(J) NNP at Market Prices:

Net National Product at market prices is the net value of final goods and services evaluated at market prices in the course of one year in a country. If we deduct depreciation from GNP at market prices, we get NNP at market prices. So NNP at Market Prices = GNP at Market Prices—Depreciation.

(K) NNP at Factor Cost:

Net National Product at factor cost is the net output evaluated at factor prices. It includes income earned by factors of production through participation in the production process such as wages and salaries, rents, profits, etc. It is also called National Income. This measure differs from NNP at market prices in that indirect taxes are deducted and subsidies are added to NNP at market prices in order to arrive at NNP at factor cost. Thus

NNP at Factor Cost = NNP at Market Prices – Indirect taxes+ Subsidies

= GNP at Market Prices – Depreciation – Indirect taxes + Subsidies.

= National Income.

Normally, NNP at market prices is higher than NNP at factor cost because indirect taxes exceed government subsidies. However, NNP at market prices can be less than NNP at factor cost when government subsidies exceed indirect taxes.

(L) Domestic Income:

Income generated (or earned) by factors of production within the country from its own resources is called domestic income or domestic product.

Domestic income includes:

(i) Wages and salaries, (ii) rents, including imputed house rents, (iii) interest, (iv) dividends, (v) undistributed corporate profits, including surpluses of public undertakings, (vi) mixed incomes consisting of profits of unincorporated firms, self- employed persons, partnerships, etc., and (vii) direct taxes.

Since domestic income does not include income earned from abroad, it can also be shown as: Domestic Income = National Income-Net income earned from abroad. Thus the difference between domestic income f and national income is the net income earned from abroad. If we add net income from abroad to domestic income, we get national income, i.e., National Income = Domestic Income + Net income earned from abroad.

But the net national income earned from abroad may be positive or negative. If exports exceed import, net income earned from abroad is positive. In this case, national income is greater than domestic income. On the other hand, when imports exceed exports, net income earned from abroad is negative and domestic income is greater than national income.

(M) Private Income:

Private income is income obtained by private individuals from any source, productive or otherwise, and the retained income of corporations. It can be arrived at from NNP at Factor Cost by making certain additions and deductions.

The additions include transfer payments such as pensions, unemployment allowances, sickness and other social security benefits, gifts and remittances from abroad, windfall gains from

lotteries or from horse racing, and interest on public debt. The deductions include income from government departments as well as surpluses from public undertakings, and employees' contribution to social security schemes like provident funds, life insurance, etc.

Thus Private Income = National Income (or NNP at Factor Cost) + Transfer Payments + Interest on Public Debt — Social Security — Profits and Surpluses of Public Undertakings.

(N) Personal Income:

Personal income is the total income received by the individuals of a country from all sources before payment of direct taxes in one year. Personal income is never equal to the national income, because the former includes the transfer payments whereas they are not included in national income.

Personal income is derived from national income by deducting undistributed corporate profits, profit taxes, and employees' contributions to social security schemes. These three components are excluded from national income because they do reach individuals.

But business and government transfer payments, and transfer payments from abroad in the form of gifts and remittances, windfall gains, and interest on public debt which are a source of income for individuals are added to national income. Thus Personal Income = National Income – Undistributed Corporate Profits – Profit Taxes – Social Security Contribution + Transfer Payments + Interest on Public Debt.

Personal income differs from private income in that it is less than the latter because it excludes undistributed corporate profits.

Thus Personal Income = Private Income – Undistributed Corporate Profits – Profit Taxes.

(O) Disposable Income:

Disposable income or personal disposable income means the actual income which can be spent on consumption by individuals and families. The whole of the personal income cannot be spent on consumption, because it is the income that accrues before direct taxes have actually been paid. Therefore, in order to obtain disposable income, direct taxes are deducted from personal income. Thus Disposable Income=Personal Income – Direct Taxes.

But the whole of disposable income is not spent on consumption and a part of it is saved. Therefore, disposable income is divided into consumption expenditure and savings. Thus Disposable Income = Consumption Expenditure + Savings.

If disposable income is to be deduced from national income, we deduct indirect taxes plus subsidies, direct taxes on personal and on business, social security payments, undistributed corporate profits or business savings from it and add transfer payments and net income from abroad to it.

Thus Disposable Income = National Income – Business Savings – Indirect Taxes + Subsidies – Direct Taxes on Persons – Direct Taxes on Business – Social Security Payments + Transfer Payments + Net Income from abroad.

(P) Real Income:

Real income is national income expressed in terms of a general level of prices of a particular year taken as base. National income is the value of goods and services produced as expressed in terms of money at current prices. But it does not indicate the real state of the economy.

It is possible that the net national product of goods and services this year might have been less than that of the last year, but owing to an increase in prices, NNP might be higher this year. On the contrary, it is also possible that NNP might have increased but the price level might have

fallen, as a result national income would appear to be less than that of the last year. In both the situations, the national income does not depict the real state of the country. To rectify such a mistake, the concept of real income has been evolved.

In order to find out the real income of a country, a particular year is taken as the base year when the general price level is neither too high nor too low and the price level for that year is assumed to be 100. Now the general level of prices of the given year for which the national income (real) is to be determined is assessed in accordance with the prices of the base year. For this purpose the following formula is employed.

Real NNP = NNP for the Current Year x Base Year Index (=100) / Current Year Index

Suppose 1990-91 is the base year and the national income for 1999-2000 is Rs. 20,000 crores and the index number for this year is 250. Hence, Real National Income for 1999-2000 will be = 20000 x 100/250 = Rs. 8000 crores. This is also known as national income at constant prices.

(Q) Per Capita Income:

The average income of the people of a country in a particular year is called Per Capita Income for that year. This concept also refers to the measurement of income at current prices and at constant prices. For instance, in order to find out the per capita income for 2001, at current prices, the national income of a country is divided by the population of the country in that year.

$$\text{Per Capita Income for 2001} = \frac{\textit{National income} \text{ for 2001}}{\textit{Population in} \text{ 2001}}$$

Similarly, for the purpose of arriving at the Real Per Capita Income, this very formula is used.

$$\text{Real Per Capita Income for 2001} = \frac{\textit{Real national income} \text{ for 2001}}{\textit{Population in} \text{ 2001}}$$

This concept enables us to know the average income and the standard of living of the people. But it is not very reliable, because in every country due to unequal distribution of national income, a

major portion of it goes to the richer sections of the society and thus income received by the common man is lower than the per capita income.

3. Methods of Measuring National Income:

There are four methods of measuring national income. Which method is to be used depends on the availability of data in a country and the purpose in hand.

(1) Product Method:

According to this method, the total value of final goods and services produced in a country during a year is calculated at market prices. To find out the GNP, the data of all productive activities, such as agricultural products, wood received from forests, minerals received from mines, commodities produced by industries, the contributions to production made by transport, communications, insurance companies, lawyers, doctors, teachers, etc. are collected and assessed at market prices. Only the final goods and services are included and the intermediary goods and services are left out.

(2) Income Method:

According to this method, the net income payments received by all citizens of a country in a particular year are added up, i.e., net incomes that accrue to all factors of production by way of net rents, net wages, net interest and net profits are all added together but incomes received in the form of transfer payments are not included in it. The data pertaining to income are obtained from different sources, for instance, from income tax department in respect of high income groups and in case of workers from their wage bills.

(3) Expenditure Method:

According to this method, the total expenditure incurred by the society in a particular year is added together and includes personal consumption expenditure, net domestic investment, government expenditure on goods and services, and net foreign investment. This concept is based on the assumption that national income equals national expenditure.

(4) Value Added Method:

Another method of measuring national income is the value added by industries. The difference between the value of material outputs and inputs at each stage of production is the value added. If all such differences are added up for all industries in the economy, we arrive at the gross domestic product.

4. Difficulties or Limitations in Measuring National Income:

There are many conceptual and statistical problems involved in measuring national income by the income method, product method, and expenditure method.

We discuss them separately in the light of the three methods:

(A) Problems in Income Method:

The following problems arise in the computation of National Income by income method:

1**. Owner-occupied Houses:**

A person who rents a house to another earns rental income, but if he occupies the house himself, will the services of the house-owner be included in national income. The services of the owner-occupied house are included in national income as if the owner sells to himself as a tenant its services.

For the purpose of national income accounts, the amount of imputed rent is estimated as the sum for which the owner-occupied house could have been rented. The imputed net rent is calculated

as that portion of the amount that would have accrued to the house-owner after deducting all expenses.

2. Self-employed Persons:

Another problem arises with regard to the income of self-employed persons. In their case, it is very difficult to find out the different inputs provided by the owner himself. He might be contributing his capital, land, labour and his abilities in the business. But it is not possible to estimate the value of each factor input to production. So he gets a mixed income consisting of interest, rent, wage and profits for his factor services. This is included in national income.

3. Goods meant for Self-consumption:

In under-developed countries like India, farmers keep a large portion of food and other goods produced on the farm for self-consumption. The problem is whether that part of the produce which is not sold in the market can be included in national income or not. If the farmer were to sell his entire produce in the market, he will have to buy what he needs for self-consumption out of his money income. If, instead he keeps some produce for his self-consumption, it has money value which must be included in national income.

4. Wages and Salaries paid in Kind:

Another problem arises with regard to wages and salaries paid in kind to the employees in the form of free food, lodging, dress and other amenities. Payments in kind by employers are included in national income. This is because the employees would have received money income equal to the value of free food, lodging, etc. from the employer and spent the same in paying for food, lodging, etc.

(B) Problems in Product Method:

The following problems arise in the computation of national income by product method:

1. Services of Housewives:

The estimation of the unpaid services of the housewife in the national income presents a serious difficulty. A housewife renders a number of useful services like preparation of meals, serving, tailoring, mending, washing, cleaning, bringing up children, etc.

She is not paid for them and her services are not including in national income. Such services performed by paid servants are included in national income. The national income is, therefore, underestimated by excluding the services of a housewife.

The reason for the exclusion of her services from national income is that the love and affection of a housewife in performing her domestic work cannot be measured in monetary terms. That is why when the owner of a firm marries his lady secretary, her services are not included in national income when she stops working as a secretary and becomes a housewife.

When a teacher teaches his own children, his work is also not included in national income. Similarly, there are a number of goods and services which are difficult to be assessed in money terms for the reason stated above, such as painting, singing, dancing, etc. as hobbies.

2. Intermediate and Final Goods:

The greatest difficulty in estimating national income by product method is the failure to distinguish properly between intermediate and final goods. There is always the possibility of including a good or service more than once, whereas only final goods are included in national income estimates. This leads to the problem of double counting which leads to the overestimation of national income.

3. Second-hand Goods and Assets:

Another problem arises with regard to the sale and purchase of second-hand goods and assets. We find that old scooters, cars, houses, machinery, etc. are transacted daily in the country. But they are not included in national income because they were counted in the national product in the year they were manufactured.

If they are included every time they are bought and sold, national income would increase many times. Similarly, the sale and purchase of old stocks, shares, and bonds of companies are not included in national income because they were included in national income when the companies were started for the first time. Now they are simply financial transactions and represent claims.

But the commission or fees charged by the brokers in the repurchase and resale of old shares, bonds, houses, cars or scooters, etc. are included in national income. For these are the payments they receive for their productive services during the year.

4. Illegal Activities:

Income earned through illegal activities like gambling, smuggling, illicit extraction of wine, etc. is not included in national income. Such activities have value and satisfy the wants of the people but they are not considered productive from the point of view of society. But in countries like Nepal and Monaco where gambling is legalised, it is included in national income. Similarly, horse-racing is a legal activity in England and is included in national income.

5. Consumers' Service:

There are a number of persons in society who render services to consumers but they do not produce anything tangible. They are the actors, dancers, doctors, singers, teachers, musicians, lawyers, barbers, etc. The problem arises about the inclusion of their services in national income since they do not produce tangible commodities. But as they satisfy human wants and receive

payments for their services, their services are included as final goods in estimating national income.

6. Capital Gains:

The problem also arises with regard to capital gains. Capital gains arise when a capital asset such as a house, some other property, stocks or shares, etc. is sold at higher price than was paid for it at the time of purchase. Capital gains are excluded from national income because these do not arise from current economic activities. Similarly, capital losses are not taken into account while estimating national income.

7. Inventory Changes:

All inventory changes (or changes in stocks) whether positive or negative are included in national income. The procedure is to take changes in physical units of inventories for the year valued at average current prices paid for them.

The value of changes in inventories may be positive or negative which is added or subtracted from the current production of the firm. Remember, it is the change in inventories and not total inventories for the year that are taken into account in national income estimates.

8. Depreciation:

Depreciation is deducted from GNP in order to arrive at NNP. Thus depreciation lowers the national income. But the problem is of estimating the current depreciated value of, say, a machine, whose expected life is supposed to be thirty years. Firms calculate the depreciation value on the original cost of machines for their expected life. This does not solve the problem because the prices of machines change almost every year.

9. Price Changes:

National income by product method is measured by the value of final goods and services at current market prices. But prices do not remain stable. They rise or fall. When the price level rises, the national income also rises, though the national production might have fallen.

On the contrary, with the fall in the price level, the national income also falls, though the national production might have increased. So price changes do not adequately measure national income. To solve this problem, economists calculate the real national income at a constant price level by the consumer price index.

(C) Problems in Expenditure Method:

The following problems arise in the calculation of national income by expenditure method:

(1) Government Services:

In calculating national income by, expenditure method, the problem of estimating government services arises. Government provides a number of services, such as police and military services, administrative and legal services. Should expenditure on government services be included in national income?

If they are final goods, then only they would be included in national income. On the other hand, if they are used as intermediate goods, meant for further production, they would not be included in national income. There are many divergent views on this issue.

One view is that if police, military, legal and administrative services protect the lives, property and liberty of the people, they are treated as final goods and hence form part of national income. If they help in the smooth functioning of the production process by maintaining peace and security, then they are like intermediate goods that do not enter into national income.

In reality, it is not possible to make a clear demarcation as to which service protects the people and which protects the productive process. Therefore, all such services are regarded as final goods and are included in national income.

(2) Transfer Payments:

There arises the problem of including transfer payments in national income. Government makes payments in the form of pensions, unemployment allowance, subsidies, interest on national debt, etc. These are government expenditures but they are not included in national income because they are paid without adding anything to the production process during the current year.

For instance, pensions and unemployment allowances are paid to individuals by the government without doing any productive work during the year. Subsidies tend to lower the market price of the commodities. Interest on national or public debt is also considered a transfer payment because it is paid by the government to individuals and firms on their past savings without any productive work.

(3) Durable-use Consumers' Goods:

Durable-use consumers' goods also pose a problem. Such durable-use consumers' goods as scooters, cars, fans, TVs, furniture's, etc. are bought in one year but they are used for a number of years. Should they be included under investment expenditure or consumption expenditure in national income estimates? The expenditure on them is regarded as final consumption expenditure because it is not possible to measure their used up value for the subsequent years.

But there is one exception. The expenditure on a new house is regarded as investment expenditure and not consumption expenditure. This is because the rental income or the imputed rent which the house-owner gets is for making investment on the new house. However,

expenditure on a car by a household is consumption expenditure. But if he spends the amount for using it as a taxi, it is investment expenditure.

(4) Public Expenditure:

Government spends on police, military, administrative and legal services, parks, street lighting, irrigation, museums, education, public health, roads, canals, buildings, etc. The problem is to find out which expenditure is consumption expenditure and which investment expenditure is.

Expenses on education, museums, public health, police, parks, street lighting, civil and judicial administration are consumption expenditure. Expenses on roads, canals, buildings, etc. are investment expenditure. But expenses on defence equipment are treated as consumption expenditure because they are consumed during a war as they are destroyed or become obsolete. However, all such expenses including the salaries of armed personnel are included in national income.

5. Importance of National Income Analysis:

The national income data have the following importance:

1. For the Economy:

National income data are of great importance for the economy of a country. These days the national income data are regarded as accounts of the economy, which are known as social accounts. These refer to net national income and net national expenditure, which ultimately equal each other.

Social accounts tell us how the aggregates of a nation's income, output and product result from the income of different individuals, products of industries and transactions of international trade. Their main constituents are inter-related and each particular account can be used to verify the correctness of any other account.

2. National Policies:

National income data form the basis of national policies such as employment policy, because these figures enable us to know the direction in which the industrial output, investment and savings, etc. change, and proper measures can be adopted to bring the economy to the right path.

3. Economic Planning:

In the present age of planning, the national data are of great importance. For economic planning, it is essential that the data pertaining to a country's gross income, output, saving and consumption from different sources should be available. Without these, planning is not possible.

4. Economic Models:

The economists propound short-run as well as long-run economic models or long-run investment models in which the national income data are very widely used.

5. Research:

The national income data are also made use of by the research scholars of economics. They make use of the various data of the country's input, output, income, saving, consumption, investment, employment, etc., which are obtained from social accounts.

6. Per Capita Income:

National income data are significant for a country's per capita income which reflects the economic welfare of the country. The higher the per capita income, the higher the economic welfare of the country.

7. Distribution of Income:

National income statistics enable us to know about the distribution of income in the country. From the data pertaining to wages, rent, interest and profits, we learn of the disparities in the incomes of different sections of the society. Similarly, the regional distribution of income is revealed.

It is only on the basis of these that the government can adopt measures to remove the inequalities in income distribution and to restore regional equilibrium. With a view to removing these

personal and regional disequibria, the decisions to levy more taxes and increase public expenditure also rest on national income statistics.

6. Inter-Relationship among different concept of National Income

The inter-relationship among the various concept of national income can be shown in the form of equations as under:

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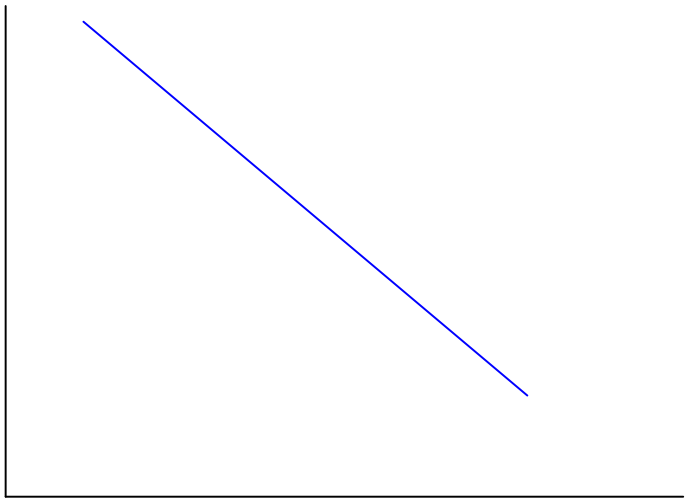
1.	Gross National Product (GNP)	=	Gross National Expenditure (GNE)
2.	Gross Domestic Product (GDP)	=	GNP – Net Income from abroad.
3.	GNP at Market Prices	=	GNP at Factor Cost + Indirect Taxes – Subsidies
4.	NNP at Market Prices	=	GNP at Market Prices – Depreciation or Capital Consumption Allowance
5.	Net Domestic Product (NDP) at Market Prices	=	NNP at Market Prices – Net Factor Income from abroad
6.	NNP at Factor Cost or National Income or National Product	=	NNP at Market Prices – Indirect Taxes + Subsidies
7.	NDP at Factor Cost or Domestic Income or Domestic Product	=	National Income – Net Factor Income from abroad
8.	Private Income	=	NNP at Factor Cost + Government and Business Transfer Payments + Current Transfers from abroad in the form of Gifts and Remittances + Windfall Gains + Net Factor Income from abroad + Interest on Public Debt and Consumer Interest – Social Security Contribution – Income from Government Departments and property – Profits and Surpluses of Public Corporations (or Undertakings) Or = Income from Domestic Product accruing to Private Sector + Interest on Public Dept + Net Factor Income from abroad + Transfer Payments + Current Transfers from the rest of the world (or abroad)
9.	Income from Domestic Product accruing to Private Sector	=	NDP at Factor Cost – Income from Domestic Product accruing to Government Departments – Saving of Non-Departmental Enterprises.
10.	Personal Income	=	Private Income – Saving of Private Corporate Sector (or Undistributed Corporate Profits) – Corporation Tax (or Profit Taxes)
11.	Personal Disposable Income or Disposable Income	=	Personal Income – Direct Taxes paid by Households (or Direct Personal Taxes) and Miscellaneous Fees, Fines, etc. Or = NDP at Factor Cost + Transfer Payments + Net Factor Income from abroad – Corporation Tax – Undistributed Corporate Profits – Social Security Payments – Direct Personal Taxes Or = National Income at Factor Cost + Transfer Payments + Net Income from abroad – Corporate Tax – undistributed Corporate Profits – Social Security payments – Direct Personal Taxes – Indirect Taxes + Subsidies.

UNIT 2

1. Aggregate Demand

Aggregate demand is the demand for all goods and services produced in the United States. The graph below shows the aggregate demand curve. The graph tells us that, as the prices of all goods and services (the GDP Deflator) rise (fall), the demand for all goods and services (aggregate demand) will fall (rise).

GDP Deflator



Aggregate Demand

Real GDP

Notice that the aggregate demand curve looks just like the demand curve for an individual product. This is convenient. But one does not follow from the other. **There are several reasons for the downward slope of the aggregate demand curve (that is, for the fact that people will buy fewer goods and services if the prices of all goods and services rise)**. Some of these reasons we will encounter later in the course. But two of the reasons have already been explained. ***First, in Chapter 7, you learned that, if the prices of all goods and services rise in the United States, Americans will buy more imported products and foreigners will buy fewer***

American exports products. **Both of these changes will reduce aggregate demand** (that is, the demand for goods and services produced in the United States). Remember that aggregate demand includes consumer spending, business investment spending, government purchases, and net exports. So if net exports decrease, aggregate demand decreases. ***Second, in Chapter 4, you learned that, as the prices of all goods and services rise (this is inflation), people whose wealth is in financial form are losers***. That is, those with checking accounts, savings accounts, CDs, bonds, bills, stocks, and so forth will see their assets go down in value. ***If people become less wealthy, they are likely to spend less, causing aggregate demand to fall***. There are other reasons for the downward slope of the aggregate demand curve. These will be explained in future chapters.

The graph operates in the same manner as the graphs we have used earlier. What will cause a **movement along** the aggregate demand curve? The answer is a change in the **prices** of all goods and services produced in the United States (that is, in **the GDP Deflator**). What will cause a **shift** in the aggregate demand curve? The answer is a change in **anything other than the prices** of all goods and services produced in the United States. ***Remember again that aggregate demand is divided into four categories: consumption, business investment spending, government purchases, and net exports***. So, anything that affects any of these categories (other than prices) will cause the aggregate demand curve to shift. Remember that, if aggregate demand increases, the shift is to the **right** and if aggregate demand decreases, the shift is to the **left**.

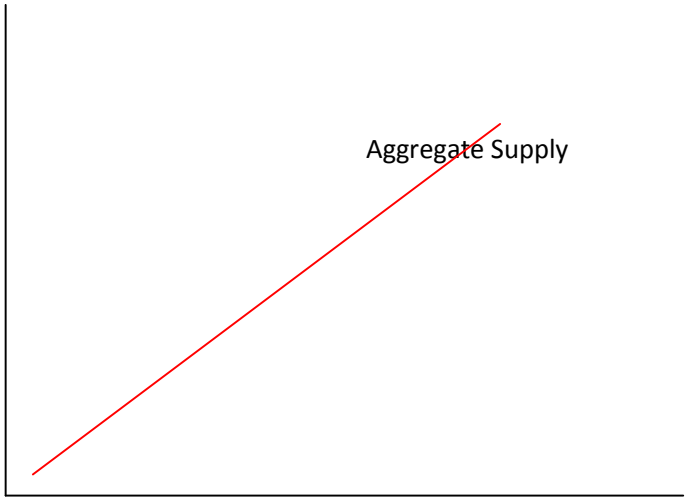
All of these factors will cause the aggregate demand curve to shift. But most of our focus in the course will be on **fiscal policy** and **monetary policy**. As you learned in Chapter 1, ***fiscal (government) policy involves changes in government spending and in the tax system.*** Government spending can involve either ***government purchases or government transfers***, such as Social Security. So, if the government purchases increase, perhaps for an increase in defense spending, aggregate demand increases. The aggregate demand curve would shift right. And if the government transfers increase, perhaps for an increase in social security payments, aggregate demand increases. Again, the aggregate demand curve would shift right. And if the government increases taxes, aggregate demand decreases. If the government takes the income from you, you cannot spend it. The aggregate demand curve would shift left. Also, as you learned in Chapter 1, ***monetary policy involves changes in the money supply (the number of dollars in existence)***. If the money supply increases, there are more dollars. Someone with those dollars would spend them. Aggregate demand would increase. The aggregate demand curve would shift to the right.

If the money supply decreases, the aggregate demand curve shifts left. The agency responsible for changes in the money supply is called the ***Federal Reserve System*** **(Fed)**.

2. Aggregate Supply

Aggregate supply refers to the supply of all goods and services produced in the United States. The graph below shows the aggregate supply curve. The graph tells us that, ***as the prices of all goods and services (the GDP Deflator) rise (fall), the supply of all goods and services (aggregate supply) will rise (fall).***

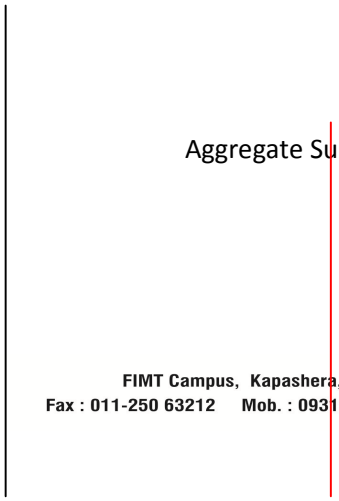
GDP Deflator



Notice that this aggregate supply curve looks just like the supply curve for an individual product. Again, this is convenient. But, again, one does not follow from the other. The reasons for the upward slope of the aggregate supply curve (that is, for the fact that companies will sell more of all goods and services if the prices of all goods and services rise).

There is some disagreement about the shape of this aggregate supply curve. Some people believe that the aggregate supply curve is actually vertical, as shown below.

GDP Deflator

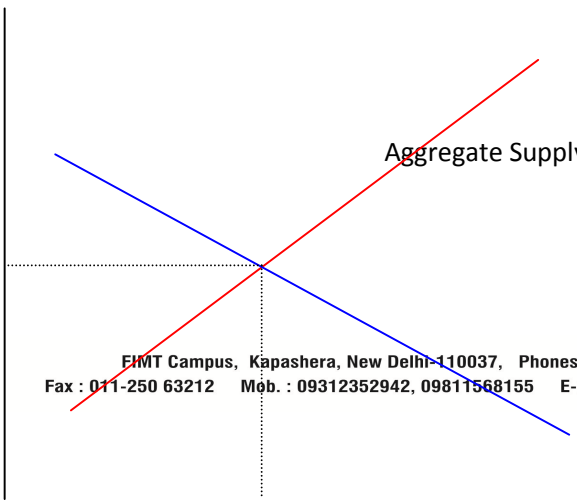


0 Q* Real GDP

According to this graph, the quantity of all goods produced in the United States will be the same whether the prices of these goods rise or fall. The quantity that will remain unchanged (Q*) is the Potential Real GDP. As you learned in Chapter 2, the Potential Real GDP is the amount of production necessary to have full-employment (the natural rate of unemployment). Today, we think this means the amount of production necessary to generate enough jobs so that the unemployment rate is only 4%. Those who argue that the aggregate supply curve is vertical believe that the economy will always be able to maintain the Potential Real GDP (the economy will never experience a recessionary or inflationary gap). We will consider this argument later. But in this chapter, we will assume that the graph looks like the upward-sloping one above. With this graph, there is much we can explain.

The Aggregate Supply graph operates in the same manner as the other graphs. What will cause a movement along the aggregate supply curve? The answer is a change in the prices of all goods and services produced in the United States (that is, in the GDP Deflator). What will cause a shift in the aggregate supply curve? The answer is a change in anything other than the prices of all goods and services produced in the United States. In this course, we will focus on only one factor that will shift the aggregate supply curve --- a change in the costs of production. Any change that increases costs of production will decrease aggregate supply, shifting the aggregate supply curve to the left. Any change that decreases costs of production will increase aggregate supply, shifting the aggregate supply curve to the right.

3. Macroeconomic Equilibrium- Putting the aggregate demand and the aggregate supply curves together provides us with equilibrium, as it did for individual products. This is shown in the graph below.GDP Deflator



E Aggregate Demand

P_1 _____

0 Q_1 Real GDP

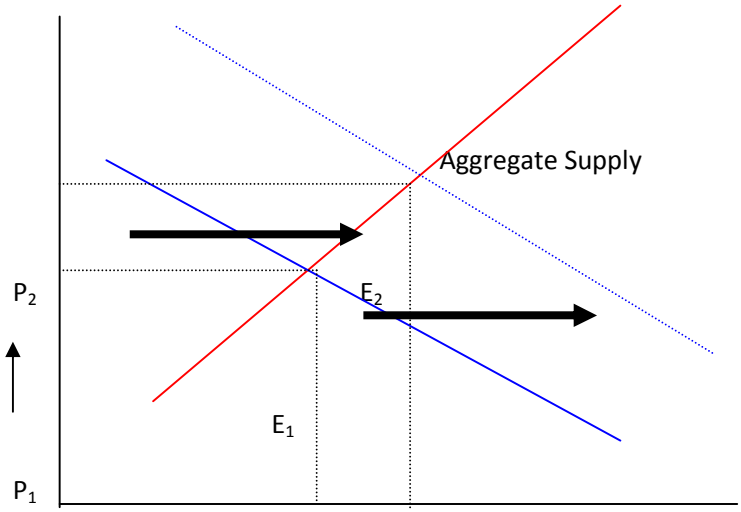
The behaviors of all buyers (aggregate demand) and the behaviors of all sellers (aggregate supply) have determined that the quantity (Real Gross Domestic Product) will be Q_1 and that the price index (GDP Deflator) will be P_1. In the 1st quarter of 2006, Q_1 would equal $11,381 billion and P_1 would equal 114.41. We know that both aggregate demand and aggregate supply can change. Each can increase and each can decrease. So there are four possibilities. Let us examine each in turn and use them to illustrate some recent American economic history.

4. Changes in Aggregate Demand or Aggregate Supply

Case 1: Aggregate Demand Increases

Let us assume that something occurs to cause aggregate demand to shift to the right (increase). This is shown in the graph below.

GDP Deflator



Aggregate Demand$_2$

0 Q_1 Q_2 Real GDP

First, what happens to Real GDP if aggregate demand rises? As you can see, Real GDP rises.A period in which Real GDP is rising is called ***an expansion***. And during an expansion, unemployment falls. The increase in goods and services being produced and the reduction in unemployment are both good things. Second, what happens to prices (the GDP Deflator) if aggregate demand rises? As you can see, they rise. A rise in prices is, of course, called inflation. But since the cause was an increase in aggregate demand, we call this ***"demand inflation"***. As you know from So there is **a trade-off** involved; we gain the benefits of greater production and lower unemployment but bear the costs of higher inflation.

This situation is relevant to understanding several periods in recent American economic history. First, there is the period from 1964 to 1969. The increase in aggregate demand began with a tax decrease known as the **Kennedy Tax Cut of 1964** (to be discussed in Chapter 18). Then, there was a large increase in government purchases. This began with a series of government spending programs known as the **War on Poverty** in 1964. Then, there was a large increase in government spending on health care as **Medicare** was passed in 1965. Medicare provides health insurance coverage for people over age 65. Most significantly, there was a large increase in government spending as the **Vietnam War** spending rose significantly throughout the decade. As our graph shows, there was an expansion in this period. The expansion lasted 8 ½ years, which was the longest expansion in American history until the 1990s. Unemployment fell to a low of 3.2%, a rate that has not been achieved since. But as the graph also shows, the result was inflation. The period of steady inflation began in the decade of the 1960s.

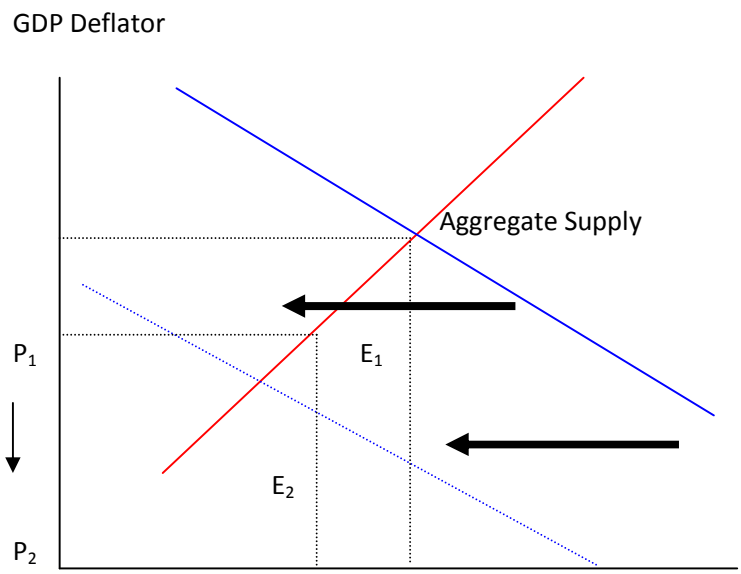
The period from 1982 to 1990 also illustrates the effects of an increase in aggregate demand. In this period, there was an increase in aggregate demand caused by the large increase in defense spending, by a major tax cut passed in 1981, and by an increase in the money supply by the Federal Reserve. The 1981 tax cut, under President Reagan, will be analyzed in some detail in Chapters 17 and 19. The increase in aggregate demand caused an expansion. Real GDP rose. Unemployment fell from over 10% in the fall of 1982 to a low of 5% in March of 1989. The Consumer Price Index (CPI) rose from 94.3 in January of 1982 to 127.4 eight years later. (Go back to Chapter 4 to review the interpretation of the Consumer Price Index (CPI) numbers).

Finally, the ten-year period from 1991 to 2001 illustrates the effect of an increase in aggregate demand. Here, the major cause was an increase in the money supply and resulting low interest rates. The low interest rates caused business investment spending to greatly increase creating an expansion --- the longest in American history. Unemployment fell to a low of 3.9% in 2000. But

again, there was inflation. The Consumer Price Index (CPI) rose again from 134.6 in January of 1991 to172.2 at the end of 2000.

Case 2: Decrease in Aggregate Demand

Now, let us assume that something occurs to cause aggregate demand to shift to the left (decrease). This is shown in the graph below.



First, what happens to Real GDP if aggregate demand decreases? As you can see, Real GDP falls. As you know from Chapter 3, a period in which Real GDP is falling is called ***a recession***. And during a recession, unemployment rises. The decrease in goods and services being produced and the increase in unemployment are both bad things. Second, what happens to prices (the GDP Deflator) if aggregate demand decreases? As you can see, they fall. A decrease in prices is called ***deflation***. In Chapter 4, you learned that the United States has not experienced deflation over a full year since the 1950s. In reality, in this situation, we would see ***disinflation*** (not shown on the graph). ***Disinflation means that prices are still rising, but they are rising at a slower rate than previously***. If prices rise 4% one year and then rise 3% more the next year, we have disinflation. We will consider later why the country experiences disinflation, and not deflation, when aggregate demand falls. Both deflation and disinflation can be considered good. So once again, there is **a trade-off**. We gain the benefits of deflation or disinflation. But we must bear the burden of falling production and rising unemployment.

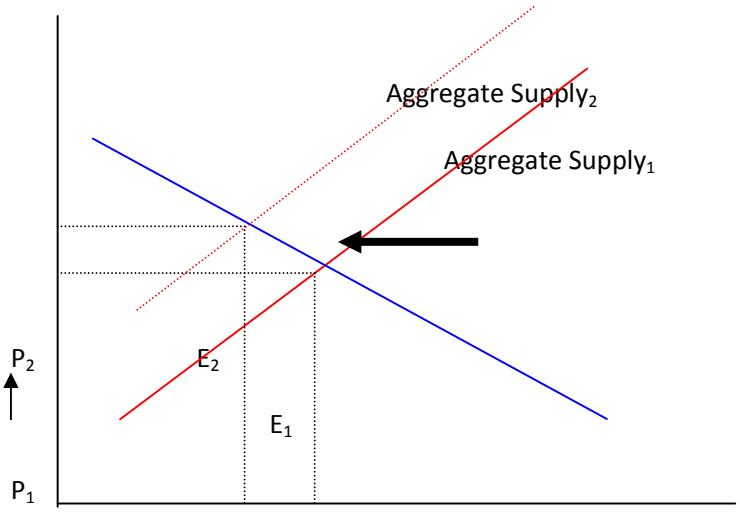
The graph on the previous page illustrates several periods in recent American history. From 1969 to 1971, from 1974 to 1976, and again from 1979 to 1982, aggregate demand fell due to a decrease in the money supply by the Federal Reserve. In all three periods, the Federal Reserve decreased the money supply in order to try to slow inflation. In all three periods, the Federal Reserve succeeded. The United States experienced disinflation each time. However, the United States also experience recession each time, with falling production and rising unemployment. Unemployment reached its postwar peak of over 10% in 1982. The graph also illustrates the period from 1990 to 1991. In this case, the decrease in aggregate demand was not caused by a decrease in the money supply. Instead, the causes were a decrease in consumer spending, as consumers found themselves heavily in debt, and a decrease in government spending on the military, as the Cold War came to an end. The decrease in spending on military equipment, bases, and personnel caused the 1990 recession to be particularly severe in southern California.

Finally, the graph illustrates the period from 2000 to 2001. In this case, aggregate demand fell because of a decline in business investment spending. We will consider this near the end of the course.

Case 3: Decrease in Aggregate Supply

Now let us assume there is a shift of aggregate supply to the left (a decrease). This is shown in the graph below.

GDP Deflator



What happens to Real GDP if aggregate supply decreases? As you can see, Real GDP falls. As you know, a period in which Real GDP is falling is called ***a recession***. During a recession, unemployment rises. The decrease in goods and services being produced and the increase in unemployment are both bad. What happens to prices (the GDP Deflator) if aggregate supply decreases? As you can see, they rise. A rise in prices is ***inflation***. Why would aggregate supply decrease? As you saw earlier in this chapter, aggregate supply decreases when something occurs to increase the costs of production. Because this is so, the resulting inflation is called ***"cost-inflation"***, to differentiate it from demand- inflation. Notice that there is no trade-off now. The decline in production is a bad thing. The rise in unemployment is a bad thing. The rise in prices is a bad thing. This is a "Murphy's Law" situation: everything that could go wrong did go wrong. **A period with both recession and cost-inflation together is called *stagflation* (a combination of the words stagnation and inflation)**.

There were two important periods in recent American economic history that illustrate this graph. One began in 1973. The other began in 1979. In both cases, **aggregate supply shifted to the left because of a large increase in costs of production caused by increases in the price of oil**. In the 1973 period, oil prices rose from about $4 per barrel to about $14.50 per barrel in a little over one year. (A barrel of oil is 42 gallons.) In the 1979 period, oil prices rose from the $14.50 per barrel to almost $40 per barrel, before settling in at around $28 per barrel. This meant that oil prices in 1980 were seven times what they had been at the beginning of 1973. As oil is involved in the costs of so many products, these costs rose greatly. (Oil is used in power generation, in all transportation, in the development of plastic materials, and so forth.) Because the costs of production rose greatly, consumer prices also rose greatly (as high as 13 1/2 % per year by 1980). Since the price rises were shocking, and since it was a decrease in aggregate

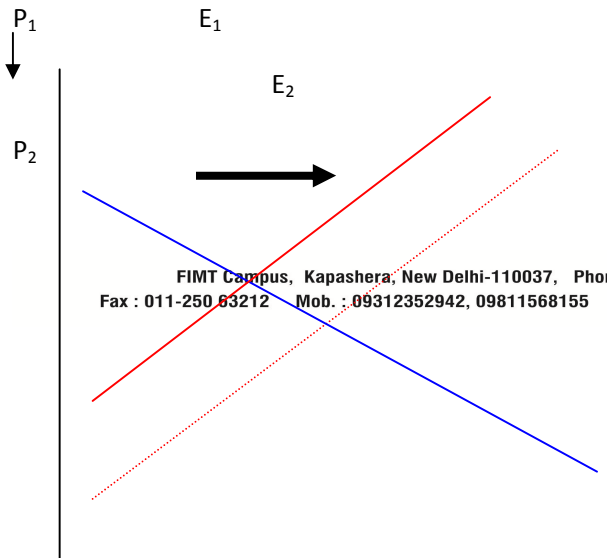
supply that caused them, they came to be called ***supply shocks***. In both periods, the supply shocks caused stagflation. The United States went through both a severe recession and a severe inflation in each period. Both periods led up to elections in which the incumbent President was defeated (Ford in 1976 and Carter in 1980). Oil prices rose dramatically again in 2000, 2003, and 2006. By the time of this writing (May 2006), the price of a barrel of oil had risen to over $70 (up from under $20 a few years earlier). Some people feared another round of stagflation. So far, this has not happened.

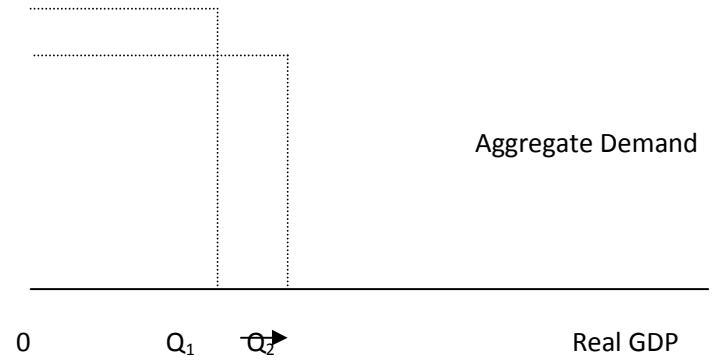
Case 4: An Increase in Aggregate Supply

Finally, let us assume there is a shift of aggregate supply to the right (an increase). This is shown in the graph on the next page.

What happens to Real GDP if aggregate supply increases? As you can see, Real GDP increases. As you know, a period in which Real GDP is increasing is called **an *expansion***. During an expansion, unemployment falls. The increase in goods and services being produced and the decrease in unemployment are both good things. What happens to prices (the GDP Deflator) if aggregate supply increases? As you can see, they decrease. A decrease in prices is ***deflation*** (in reality, we would most likely see ***disinflation***). This is a "win-win" situation. The rise in production, the fall in unemployment, and the decline in inflation rates are all good things.

GDP Deflator





What would make aggregate supply increase? We would like to know, as the results of an increase in aggregate supply are all good. ***The answer is that aggregate supply increases if something happens to make the costs of production decrease***. This graph likely characterizes the period from 1995 to 2000 and again from late 2001 to the present. In this period, aggregate supply has been rising because of a large increase in the productivity of workers. We will consider this increase near the end of the course.

Business Cycle-

Definition: The business cycle is the natural rise and fall of economic growth that occurs over time. The cycle is a useful tool for analyzing the economy. It can also help you make better financial decisions.

Stages

Each business cycle has four phases. They are expansion, peak, contraction and trough. They don't occur at regular intervals. But they do have recognizable indicators.

Expansion is between the trough and the peak.

That's when the economy is growing. Gross domestic product, which measures economic output, is increasing. The GDP growth rate is in the healthy 2-3 percent range. Unemployment reaches its natural rate of 4.5 to 5.0 percent. Inflation is near its 2 percent target. The stock market is in a bull market. A well-managed economy can remain in the expansion phase for years. That's called a Goldilocks economy.

The expansion phase nears its end when the economy overheats. That's when the GDP growth rate is greater than 3 percent. Inflation is greater than 2 percent and may reach the double digits. Investors are in a state of "irrational exuberance." That's when they create asset bubbles.

The peak is the second phase. It is the month when the expansion transitions into the contraction phase.

The third phase is contraction. It starts at the peak and ends at the trough. Economic growth weakens. GDP growth falls below 2 percent.

When it turns negative, that is what economists call a recession. Mass layoffs make headline news. The unemployment rate begins to rise. It doesn't happen until toward the end of the contraction phase because it's a lagging indicator. Businesses wait to hire new workers until they are sure the recession is over.

Stocks enter a bear market as investors sell.

The trough is the fourth phase. That's the month when the economy transitions from the contraction phase to the expansion phase. It's when the economy hits bottom. (Source: "The National Business Cycle Dating Procedure: Frequently Asked Questions," National Bureau of Economic Research.)

The business cycle's four phases can be so severe that they're also called the boom and bust cycle.

Who Measures the Business Cycle?

The National Bureau of Economic Research determines business cycle stages using quarterly GDP growth rates. It also uses monthly economic indicators, such as employment, real personal income, industrial production and retail sales. It takes time to analyze this data, so the NBER doesn't tell you the phase until after it's begun. But you can look at the indicators yourself to determine what phase of the business cycle we are currently in.

Who Manages the Business Cycle?

The government manages the business cycle. Legislators uses fiscal policy to influence the economy. They use expansionary fiscal policy when they want to end a recession. They should use contractionary fiscal policy to keep the economy from overheating. But that rarely happens.

That's because they get voted out of office when they raise taxes or cut popular programs.

The nation's central bank uses monetary policy. It lowers interest rates to end a contraction or trough. That's called expansionary monetary policy. The central bank raises rates to manage an expansion so it doesn't peak. That's contractionary monetary policy.

The goal of economic policy is to keep the economy growing at a sustainable rate. It should be strong enough to create jobs for everyone who wants one but slow enough to avoid inflation.

Three factors cause each phase of the business cycle. Those are the forces of supply and demand, the availability of capital and consumer confidence. The most critical is confidence in the future. The economy grows when there is faith in the future and in policymakers.

It does the opposite when confidence drops. See how this worked in each business cycles since 1929.

Fiscal Policy

Definition: Fiscal policy is the government spending and taxation that influences the economy. Elected officials should coordinate with monetary policy to create healthy economic growth. They usually don't. Why? Fiscal policy reflects the priorities of individual lawmakers. They focus on the needs of their constituencies. These local needs overrule national economic priorities. As a result, fiscal policy is hotly debated, whether at the federal, state, county or municipal level.

Fiscal Policy vs. Monetary Policy

Monetary policy is when a nation's central bank changes the money supply. It increases it with expansionary monetary policy and decreases it with contractionary monetary policy. It has many tools it can use, but it primarily relies on raising or lowering the fed funds rate. This benchmark rates then guides all other interest rates. When interest rates are high, the money supply contracts, the economy cools down, and inflation is prevented. When interest rates are low, the money supply expands, the economy heats up, and a recession is usually avoided.

Monetary policy works faster than fiscal policy. The Fed can just vote to raise or lower rates at its regular Federal Open Market Committee meeting. It may take about six months for the impact of the rate cut to percolate throughout the economy.

UNIT 3

Money

Money is anything serving as a medium of exchange. Most definitions of money take 'functions of money' as their starting point. 'Money is that which money does.' According to Prof. Walker, 'Money is as money does.'

Functions of Money

1. Money as the Medium of Exchange:

Money came into use to remove the inconveniences of barter as money has separated the act of purchase from sale. Medium of exchange is the basic or primary function of money. People exchange goods and services through the medium of money. Money acts as a medium of exchange or as a medium of payments. Money by itself has no utility (except perhaps to the miser). It is only an intermediary.

The use of money facilitates exchange, exchange promotes specialisation Increases productivity and efficiency A good monetary system is, therefore, of immense utility to human society. Money is also called a bearer of options or generalised purchasing power because it provides freedom of choice to buy things he wants most from those who offer best bargain.

2. Money as a Unit of Account or Measure of Value:

Money serves as a unit of account or a measure of value. Money is the measuring rod, i.e., it is the units in terms of which the values of other goods and services are measured in money terms

and expressed accordingly Different goods produced in the country are measured in different units like cloth m metres, milk in litres and sugar in kilograms.

Without a common unit, exchange of goods becomes very difficult Values of all goods and services can be expressed easily in a single unit called money Again without a measure of value, there can be no pricing process. Without a pricing process organised marketing and production is not possible. Thus, the use of money as a measure of value is the basis of specialised production.

The measuring rod of money is also indispensable to all forms of economic planning. Consumers compare the values of alternative purchases m terms of money Producers also compare the values of alternative purchases m terms of money. Producers compare the relative costliness of the factors of production in terms of money and also plan their output on the basis of the money yield. It is, therefore, highly important that the value of money should be stable.

3. Money as the Standard of Deferred Payments:

Deferred payments are payments which are made some time in the future. Debts are usually expressed in terms of the money of account. Loans are taken and repaid in terms of money. The use of money as the standard of deterred or delayed payments immensely simplifies borrowing and lending operations because money generally maintains a constant value through time. Thus, money facilitates the formation of capital markets and the work of financial intermediaries like Stock Exchange, Investment Trust and Banks. Money is the link which connects the values of today with those of the future.

4. Money as a Store of Value:

Wealth can be stored in terms of money for future. It serves as a store value of goods in liquid form. By spending it, we can get any commodity in future. Keynes places great emphasis on this function of money. Holding money is equivalent to keeping a reserve of liquid assets because it can be easily converted into other things.

People therefore normally wish to keep a part of their wealth in the form of money because savings in terms of goods is very difficult. This desire is known as liquidity preference. Clearly money is the best form of store of value. Wheat or any other product which will command a value cannot be stored for a long period.

Another Function 'Liquidity of Money' is added these days. Money is perfectly liquid. Liquidity means convertibility into cash. Thus, the ability to convert an asset into money quickly and without loss of value is called liquidity of asset. Modern economists are laying stress on liquidity of money.

Since, by definition, money is the most generally accepted commodity, it is also the most liquid of all resources. Possession of money enables one to get hold of almost any commodity in any place and money never locks a buyer. It is this peculiarity which distinguishes money from all other commodities. A preference for liquidity is preference for money.

Money, thus, acts as common medium of exchange, a common measure of value, as standard of deferred payments and a store of value.

CENTRAL BANK

A central bank plays an important role in monetary and banking system of a country.

It is responsible for maintaining financial sovereignty and economic stability of a country, especially in underdeveloped countries.

"A Central Bank is the bank in any country to which has been entrusted the duty of regulating the volume of currency and credit in that country"-Bank of International Settlement.

According to Kent, "Central Bank may be defined as an institution which is charged with the responsibility of managing the expansion and contraction of the volume of money in the interest of general public welfare."

According to Bank of International Settlement, "A Central Bank is the bank in any country to which has been entrusted the duty of regulating the volume of currency and credit in that country."

Functions of Central Bank:

The central bank does not deal with the general public directly. It performs its functions with the help of commercial banks. The central bank is accountable for protecting the financial stability and economic development of a country.

Apart from this, the central bank also plays a significant part in avoiding the cyclical fluctuations by controlling money supply in the market. As per the view of Hawtrey, a central bank should primarily be the "lender of last resort."

On the other hand, Kisch and Elkins believed that "the maintenance of the stability of the monetary standard" as the essential function of central bank. The functions of central bank are broadly divided into two parts, namely, traditional functions and developmental functions.

(a) Traditional Functions:

Refer to functions that are common to all central banks in the world.

The traditional functions of the central bank include the following:

(i) Bank of issue:

Possesses an exclusive right to issue notes (currency) in every country of the world. In the initial years of banking, every bank enjoyed the right of issuing notes. However, this led to a number of problems, such as notes were over-issued and the currency system became disorganized. Therefore, the governments of different countries authorized central banks to issue notes. The issue of notes by one bank has led to uniformity in note circulation and balance in money supply.

(ii) Government's banker, agent, and advisor:

Implies that a central bank performs different functions for the government. As a banker, the central bank performs banking functions for the government as commercial banks performs for the public by accepting the government deposits and granting loans to the government. As an agent, the central bank manages the public debt, undertakes the payment of interest on this debt, and provides all other services related to the debt.

As an advisor, the central bank gives advice to the government regarding economic policy matters, money market, capital market, and government loans. Apart from this, the central bank formulates and implements fiscal and monetary policies to regulate the supply of money in the market and control inflation.

(iii) Custodian of cash reserves of commercial banks:

Implies that the central bank takes care of the cash reserves of commercial banks. Commercial banks are required to keep certain amount of public deposits as cash reserve, with the central bank, and other part is kept with commercial banks themselves.

The percentage of cash reserves is deeded by the central bank! A certain part of these reserves is kept with the central bank for the purpose of granting loans to commercial banks Therefore, the central bank is also called banker's bank.

(iv) Custodian of international currency:

Implies that the central bank maintains a minimum reserve of international currency. The main aim of this reserve is to meet emergency requirements of foreign exchange and overcome adverse requirements of deficit in balance of payments.

(v) Bank of rediscount:

Serve the cash requirements of individuals and businesses by rediscounting the bills of exchange through commercial banks. This is an indirect way of lending money to commercial banks by the central bank. Discounting a bill of exchange implies acquiring the bill by purchasing it for the sum less than its face value.

Rediscounting implies discounting a bill of exchange that was previously discounted. When owners of bill of exchange are in need of cash they approach the commercial bank to discount these bills. If commercial banks are themselves in need of cash they approach the central bank to rediscount the bills.

(vi) Lender of last resort:

Refer to the most crucial function of the central bank. The central bank also lends money to commercial banks. Instead of rediscounting of bills, the central bank provides loans against treasury bills, government securities, and bills of exchange.

(vii) Bank of central clearance, settlement, and transfer:

Implies that the central bank helps in settling mutual indebtness between commercial banks. Depositors of banks give checks and demand drafts drawn on other banks. In such a case, it is not possible for banks to approach each other for clearance, settlement, or transfer of deposits.

The central bank makes this process easy by setting a clearing house under it. The clearing house acts as an institution where mutual indebtness between banks is settled. The representatives of different banks meet in the clearing house to settle inter-bank payments. This helps the central bank to know the liquidity state of the commercial banks.

(viii) Controller of Credit:

Implies that the central bank has power to regulate the credit creation by commercial banks. The credit creation depends upon the amount of deposits, cash reserves, and rate of interest given by commercial banks. All these are directly or indirectly controlled by the central bank. For instance, the central bank can influence the deposits of commercial banks by performing open market operations and making changes in CRR to control various economic conditions.

(b) Developmental Functions:

Refer to the functions that are related to the promotion of banking system and economic development of the country. These are not compulsory functions of the central bank.

These are discussed as follows:

(i) Developing specialized financial institutions:

Refer to the primary functions of the central bank for the economic development of a country. The central bank establishes institutions that serve credit requirements of the agriculture sector and other rural businesses.

Some of these financial institutions include Industrial Development Bank of India (IDBI) and National Bank for Agriculture and Rural Development (NABARD). These are called specialized institutions as they serve the specific sectors of the economy.

(ii) Influencing money market and capital market:

Implies that central bank helps in controlling the financial markets Money market deals in short term credit and capital market deals in long term credit. The central bank maintains the country's economic growth by controlling the activities of these markets.

(iii) Collecting statistical data:

Gathers and analyzes data related to banking, currency, and foreign exchange position of a country. The data is quite helpful for researchers, policymakers, and economists. For instance,

the Reserve Bank of India publishes a magazine called Reserve Bank of India Bulletin, whose data is useful for formulating different policies and making macro-level decisions.

Meaning of Inflation:

Inflation is often defined in terms of its supposed causes. Inflation exists when money supply exceeds available goods and services. Or inflation is attributed to budget deficit financing. A deficit budget may be financed by the additional money creation. But the situation of monetary expansion or budget deficit may not cause price level to rise. Hence the difficulty of defining 'inflation'.

Types of Inflation:

As the nature of inflation is not uniform in an economy for all the time, it is wise to distinguish between different types of inflation. Such analysis is useful to study the distributional and other effects of inflation as well as to recommend anti-inflationary policies. Inflation may be caused by a variety of factors. Its intensity or pace may be different at different times. It may also be classified in accordance with the reactions of the government toward inflation.

Thus, one may observe different types of inflation in the contemporary society:

A. On the Basis of Causes:

(i) Currency inflation:

This type of inflation is caused by the printing of currency notes.

(ii) Credit inflation:

Being profit-making institutions, commercial banks sanction more loans and advances to the public than what the economy needs. Such credit expansion leads to a rise in price level.

(iii) Deficit-induced inflation:

The budget of the government reflects a deficit when expenditure exceeds revenue. To meet this gap, the government may ask the central bank to print additional money. Since pumping of additional money is required to meet the budget deficit, any price rise may the be called the deficit-induced inflation.

(iv) Demand-pull inflation:

An increase in aggregate demand over the available output leads to a rise in the price level. Such inflation is called demand-pull inflation (henceforth DPI). But why does aggregate demand rise?

Classical economists attribute this rise in aggregate demand to money supply. If the supply of money in an economy exceeds the available goods and services, DPI appears. It has been described by Coulborn as a situation of "too much money chasing too few goods."

Keynesians hold a different argument. They argue that there can be an autonomous increase in aggregate demand or spending, such as a rise in consumption demand or investment or government spending or a tax cut or a net increase in exports (i.e., C + I + G + X – M) with no increase in money supply. This would prompt upward adjustment in price. Thus, DPI is caused by monetary factors (classical adjustment) and non-monetary factors (Keynesian argument).

DPI can be explained in terms of Fig. 4.2, where we measure output on the horizontal axis and price level on the vertical axis. In Range 1, total spending is too short of full employment output, Y_F. There is little or no rise in the price level. As demand now rises, output will rise. The economy enters Range 2, where output approaches towards full employment situation. Note that in this region price level begins to rise. Ultimately, the economy reaches full employment situation, i.e., Range 3, where output does not rise but price level is pulled upward. This is demand-pull inflation. The essence of this type of inflation is that "too much spending chasing too few goods."

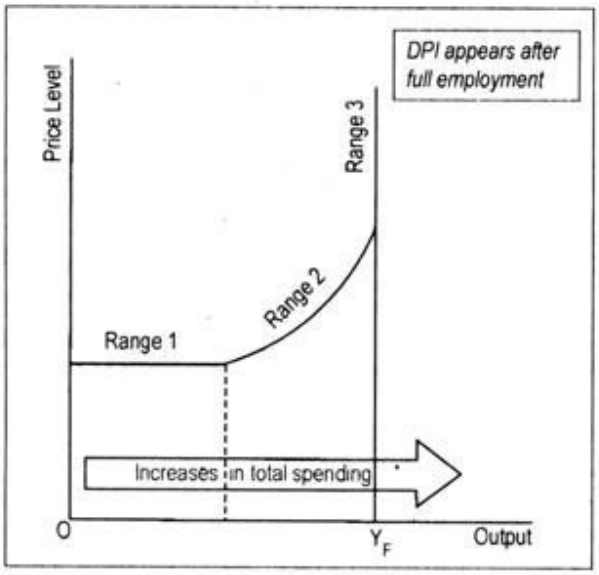


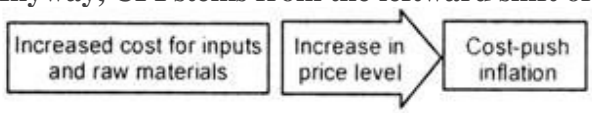
Fig. 4.2: Demand-pull Inflation

(v) Cost-push inflation:

Inflation in an economy may arise from the overall increase in the cost of production. This type of inflation is known as cost-push inflation (henceforth CPI). Cost of production may rise due to an increase in the prices of raw materials, wages, etc. Often trade unions are blamed for wage rise since wage rate is not completely market-determinded. Higher wage means high cost of production. Prices of commodities are thereby increased.

A wage-price spiral comes into operation. But, at the same time, firms are to be blamed also for the price rise since they simply raise prices to expand their profit margins. Thus, we have two important variants of CPI wage-push inflation and profit-push inflation.

Anyway, CPI stems from the leftward shift of the aggregate supply curve:



B. On the Basis of Speed or Intensity:

(i) Creeping or Mild Inflation:

If the speed of upward thrust in prices is slow but small then we have creeping inflation. What speed of annual price rise is a creeping one has not been stated by the economists. To some, a creeping or mild inflation is one when annual price rise varies between 2 p.c. and 3 p.c. If a rate of price rise is kept at this level, it is considered to be helpful for economic development. Others argue that if annual price rise goes slightly beyond 3 p.c. mark, still then it is considered to be of no danger.

(ii) Walking Inflation:

If the rate of annual price increase lies between 3 p.c. and 4 p.c., then we have a situation of walking inflation. When mild inflation is allowed to fan out, walking inflation appears. These two types of inflation may be described as 'moderate inflation'.

Often, one-digit inflation rate is called 'moderate inflation' which is not only predictable, but also keep people's faith on the monetary system of the country. Peoples' confidence get lost once moderately maintained rate of inflation goes out of control and the economy is then caught with the galloping inflation.

(iii) Galloping and Hyperinflation:

Walking inflation may be converted into running inflation. Running inflation is dangerous. If it is not controlled, it may ultimately be converted to galloping or hyperinflation. It is an extreme form of inflation when an economy gets shattered."Inflation in the double or triple digit range of 20, 100 or 200 p.c. a year is labelled "galloping inflation".

(iv) Government's Reaction to Inflation:

Inflationary situation may be open or suppressed. Because of anti-inflationary policies pursued by the government, inflation may not be an embarrassing one. For instance, increase in income leads to an increase in consumption spending which pulls the price level up.

If the consumption spending is countered by the government via price control and rationing device, the inflationary situation may be called a suppressed one. Once the government curbs are lifted, the suppressed inflation becomes open inflation. Open inflation may then result in hyperinflation.

3. Causes of Inflation:

Inflation is mainly caused by excess demand/ or decline in aggregate supply or output. Former leads to a rightward shift of the aggregate demand curve while the latter causes aggregate supply curve to shift leftward. Former is called demand-pull inflation (DPI), and the latter is called cost-push inflation (CPI). Before describing the factors, that lead to a rise in aggregate demand and a decline in aggregate supply, we like to explain "demand-pull" and "cost-push" theories of inflation.

(i) Demand-Pull Inflation Theory:

There are two theoretical approaches to the DPI—one is classical and other is the Keynesian.

According to classical economists or monetarists, inflation is caused by an increase in money supply which leads to a rightward shift in negative sloping aggregate demand curve. Given a situation of full employment, classicists maintained that a change in money supply brings about an equiproportionate change in price level.

That is why monetarists argue that inflation is always and everywhere a monetary phenomenon. Keynesians do not find any link between money supply and price level causing an upward shift in aggregate demand.

According to Keynesians, aggregate demand may rise due to a rise in consumer demand or investment demand or government expenditure or net exports or the combination of these four components of aggreate demand. Given full employment, such increase in aggregate demand leads to an upward pressure in prices. Such a situation is called DPI. This can be explained graphically.

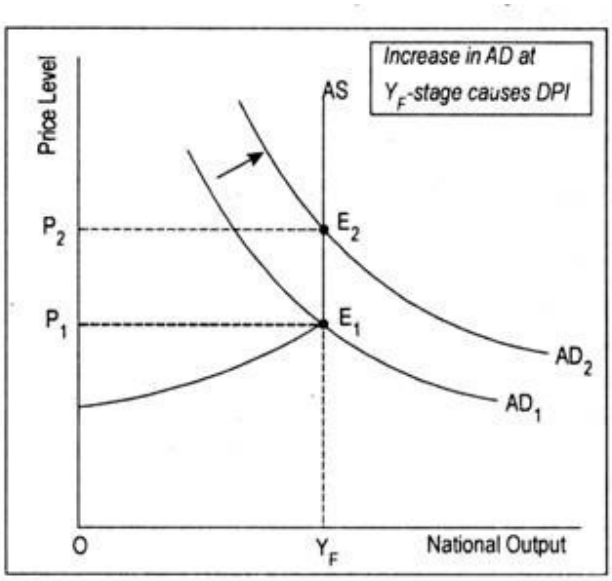


Fig. 4.3: DPI: Shifts in AD Curve

Just like the price of a commodity, the level of prices is determined by the interaction of aggregate demand and aggregate supply. In Fig. 4.3, aggregate demand curve is negative sloping while aggregate supply curve before the full employment stage is positive sloping and becomes vertical after the full employment stage is reached. AD_1 is the initial aggregate demand curve that intersects the aggregate supply curve AS at point E_1.

The price level, thus, determined is OP_1. As aggregate demand curve shifts to AD_2, price level rises to OP_2. Thus, an increase in aggregate demand at the full employment stage leads to an increase in price level only, rather than the level of output. However, how much price level will rise following an increase in aggregate demand depends on the slope of the AS curve.

(ii) Causes of Demand-Pull Inflation:

DPI originates in the monetary sector. Monetarists' argument that "only money matters" is based on the assumption that at or near full employment excessive money supply will increase aggregate demand and will, thus, cause inflation.

An increase in nominal money supply shifts aggregate demand curve rightward. This enables people to hold excess cash balances. Spending of excess cash balances by them causes price level to rise. Price level will continue to rise until aggregate demand equals aggregate supply.

Keynesians argue that inflation originates in the non-monetary sector or the real sector. Aggregate demand may rise if there is an increase in consumption expenditure following a tax cut. There may be an autonomous increase in business investment or government expenditure. Government expenditure is inflationary if the needed money is procured by the government by printing additional money.
In brief, increase in aggregate demand i.e., increase in (C + I + G + X – M) causes price level to rise. However, aggregate demand may rise following an increase in money supply generated by the printing of additional money (classical argument) which drives prices upward. Thus, money plays a vital role. That is why Milton Friedman argues that inflation is always and everywhere a monetary phenomenon.

There are other reasons that may push aggregate demand and, hence, price level upwards. For instance, growth of population stimulates aggregate demand. Higher export earnings increase the purchasing power of the exporting countries. Additional purchasing power means additional aggregate demand. Purchasing power and, hence, aggregate demand may also go up if government repays public debt.

Again, there is a tendency on the part of the holders of black money to spend more on conspicuous consumption goods. Such tendency fuels inflationary fire. Thus, DPI is caused by a variety of factors.

(iii) Cost-Push Inflation Theory:
In addition to aggregate demand, aggregate supply also generates inflationary process. As inflation is caused by a leftward shift of the aggregate supply, we call it CPI. CPI is usually associated with non-monetary factors. CPI arises due to the increase in cost of production. Cost of production may rise due to a rise in cost of raw materials or increase in wages.

However, wage increase may lead to an increase in productivity of workers. If this happens, then the AS curve will shift to the right- ward not leftward—direction. We assume here that productivity does not change in spite of an increase in wages.

Such increases in costs are passed on to consumers by firms by raising the prices of the products. Rising wages lead to rising costs. Rising costs lead to rising prices. And, rising prices again prompt trade unions to demand higher wages. Thus, an inflationary wage-price spiral starts. This causes aggregate supply curve to shift leftward.

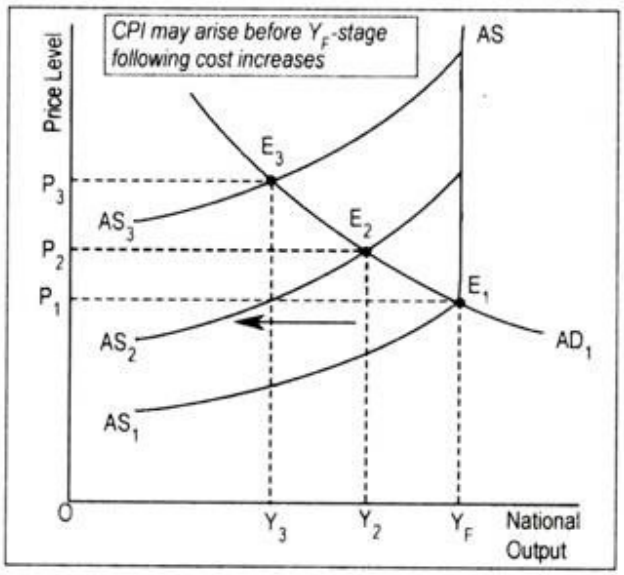


Fig. 4.4: CPI: Shifts in AS Curve

This can be demonstrated graphically where AS_1 is the initial aggregate supply curve. Below the full employment stage this AS curve is positive sloping and at full employment stage it becomes perfectly inelastic.

Intersection point (E_1) of AD_1 and AS_1 curves determine the price level (OP_1). Now there is a leftward shift of aggregate supply curve to AS_2. With no change in aggregate demand, this causes price level to rise to OP_2 and output to fall to OY_2. With the reduction in output, employment in the economy declines or unemployment rises. Further shift in AS curve to AS_3 results in a higher price level (OP_3) and a lower volume of aggregate output (OY_3). Thus, CPI may arise even below the full employment (Y_F) stage.

(iv) Causes of Cost-Push Inflation:

It is the cost factors that pull the prices upward. One of the important causes of price rise is the rise in price of raw materials. For instance, by an administrative order the government may hike the price of petrol or diesel or freight rate. Firms buy these inputs now at a higher price. This leads to an upward pressure on cost of production.

Not only this, CPI is often imported from outside the economy. Increase in the price of petrol by OPEC compels the government to increase the price of petrol and diesel. These two important raw materials are needed by every sector, especially the transport sector. As a result, transport costs go up resulting in higher general price level.

Again, CPI may be induced by wage-push inflation or profit-push inflation. Trade unions demand higher money wages as a compensation against inflationary price rise. If increase in money wages exceed labour productivity, aggregate supply will shift upward and leftward. Firms often exercise power by pushing prices up independently of consumer demand to expand their profit margins.

Fiscal policy changes, such as increase in tax rates also leads to an upward pressure in cost of production. For instance, an overall increase in excise tax of mass consumption goods is definitely inflationary. That is why government is then accused of causing inflation.

Finally, production setbacks may result in decreases in output. Natural disaster, gradual exhaustion of natural resources, work stoppages, electric power cuts, etc., may cause aggregate output to decline. In the midst of this output reduction, artificial scarcity of any goods created by traders and hoarders just simply ignite the situation.

Inefficiency, corruption, mismanagement of the economy may also be the other reasons. Thus, inflation is caused by the interplay of various factors. A particular factor cannot be held responsible for any inflationary price rise.

4. Effects of Inflation:

People's desires are inconsistent. When they act as buyers they want prices of goods and services to remain stable but as sellers they expect the prices of goods and services should go up. Such a happy outcome may arise for some individuals; "but, when this happens, others will be getting the worst of both worlds."

When price level goes up, there is both a gainer and a loser. To evaluate the consequence of inflation, one must identify the nature of inflation which may be anticipated and unanticipated. If inflation is anticipated, people can adjust with the new situation and costs of inflation to the society will be smaller.

In reality, people cannot predict accurately future events or people often make mistakes in predicting the course of inflation. In other words, inflation may be unanticipated when people fail to adjust completely. This creates various problems.

One can study the effects of unanticipated inflation under two broad headings:
(a) Effect on distribution of income and wealth; and

(b) Effect on economic growth.

(a) Effects of Inflation on Distribution of Income and Wealth:
During inflation, usually people experience rise in incomes. But some people gain during inflation at the expense of others. Some individuals gain because their money incomes rise more rapidly than the prices and some lose because prices rise more rapidly than their incomes during inflation. Thus, it redistributes income and wealth.

Though no conclusive evidence can be cited, it can be asserted that following categories of people are affected by inflation differently:
(i) Creditors and debtors:
Borrowers gain and lenders lose during inflation because debts are fixed in rupee terms. When debts are repaid their real value declines by the price level increase and, hence, creditors lose. An individual may be interested in buying a house by taking loan of Rs. 7 lakh from an institution for 7 years.

The borrower now welcomes inflation since he will have to pay less in real terms than when it was borrowed. Lender, in the process, loses since the rate of interest payable remains unaltered as per agreement. Because of inflation, the borrower is given 'dear' rupees, but pays back 'cheap' rupees. However, if in an inflation-ridden economy creditors chronically loose, it is wise not to advance loans or to shut down business.

Never does it happen. Rather, the loan-giving institution makes adequate safeguard against the erosion of real value. Above all, banks do not pay any interest on current account but charges interest on loans.

(ii) Bond and debenture-holders:

In an economy, there are some people who live on interest income—they suffer most. Bondholders earn fixed interest income: These people suffer a reduction in real income when prices rise. In other words, the value of one's savings decline if the interest rate falls short of inflation rate. Similarly, beneficiaries from life insurance programmes are also hit badly by inflation since real value of savings deteriorate.

(iii) Investors:

People who put their money in shares during inflation are expected to gain since the possibility of earning of business profit brightens. Higher profit induces owners of firm to distribute profit among investors or shareholders.

(iv) Salaried people and wage-earners:

Anyone earning a fixed income is damaged by inflation. Sometimes, unionised worker succeeds in raising wage rates of white-collar workers as a compensation against price rise. But wage rate changes with a long time lag. In other words, wage rate increases always lag behind price increases. Naturally, inflation results in a reduction in real purchasing power of fixed income-earners.

On the other hand, people earning flexible incomes may gain during inflation. The nominal incomes of such people outstrip the general price rise. As a result, real incomes of this income group increase.

(v) Profit-earners, speculators and black marketers:

It is argued that profit-earners gain from inflation. Profit tends to rise during inflation. Seeing inflation, businessmen raise the prices of their products. This results in a bigger profit. Profit margin, however, may not be high when the rate of inflation climbs to a high level.

However, speculators dealing in business in essential commodities usually stand to gain by inflation. Black marketers are also benefited by inflation.

Thus, there occurs a redistribution of income and wealth. It is said that rich becomes richer and poor becomes poorer during inflation. However, no such hard and fast generalisation can be made. It is clear that someone wins and someone loses during inflation.

These effects of inflation may persist if inflation is unanticipated. However, the redistributive burdens of inflation on income and wealth are most likely to be minimal if inflation is anticipated by the people. With anticipated inflation, people can build up their strategies to cope with inflation.

If the annual rate of inflation in an economy is anticipated correctly people will try to protect them against losses resulting from inflation. Workers will demand 10 p.c. wage increase if inflation is expected to rise by 10 p.c.

Similarly, a percentage of inflation premium will be demanded by creditors from debtors. Business firms will also fix prices of their products in accordance with the anticipated price rise. Now if the entire society "learn to live with inflation", the redistributive effect of inflation will be minimal.

However, it is difficult to anticipate properly every episode of inflation. Further, even if it is anticipated it cannot be perfect. In addition, adjustment with the new expected inflationary conditions may not be possible for all categories of people. Thus, adverse redistributive effects are likely to occur.

Finally, anticipated inflation may also be costly to the society. If people's expectation regarding future price rise become stronger they will hold less liquid money. Mere holding of cash balances during inflation is unwise since its real value declines. That is why people use their money balances in buying real estate, gold, jewellery, etc. Such investment is referred to as unproductive investment. Thus, during inflation of anticipated variety, there occurs a diversion of resources from priority to non-priority or unproductive sectors.

(b) Effect on Production and Economic Growth:

Inflation may or may not result in higher output. Below the full employment stage, inflation has a favourable effect on production. In general, profit is a rising function of the price level. An inflationary situation gives an incentive to businessmen to raise prices of their products so as to earn higher volume of profit. Rising price and rising profit encourage firms to make larger investments.

As a result, the multiplier effect of investment will come into operation resulting in a higher national output. However, such a favourable effect of inflation will be temporary if wages and production costs rise very rapidly.

Further, inflationary situation may be associated with the fall in output, particularly if inflation is of the cost-push variety. Thus, there is no strict relationship between prices and output. An increase in aggregate demand will increase both prices and output, but a supply shock will raise prices and lower output.

Inflation may also lower down further production levels. It is commonly assumed that if inflationary tendencies nurtured by experienced inflation persist in future, people will now save less and consume more. Rising saving propensities will result in lower further outputs.

One may also argue that inflation creates an air of uncertainty in the minds of business community, particularly when the rate of inflation fluctuates. In the midst of rising inflationary trend, firms cannot accurately estimate their costs and revenues. That is, in a situation of unanticipated inflation, a great deal of risk element exists.

It is because of uncertainty of expected inflation, investors become reluctant to invest in their business and to make long-term commitments. Under the circumstance, business firms may be deterred in investing. This will adversely affect the growth performance of the economy.

However, slight dose of inflation is necessary for economic growth. Mild inflation has an encouraging effect on national output. But it is difficult to make the price rise of a creeping variety. High rate of inflation acts as a disincentive to long run economic growth. The way the hyperinflation affects economic growth is summed up here. We know that hyper-inflation discourages savings.

A fall in savings means a lower rate of capital formation. A low rate of capital formation hinders economic growth. Further, during excessive price rise, there occurs an increase in unproductive investment in real estate, gold, jewellery, etc. Above all, speculative businesses flourish during inflation resulting in artificial scarcities and, hence, further rise in prices.

Again, following hyperinflation, export earnings decline resulting in a wide imbalances in the balance of payment account. Often galloping inflation results in a 'flight' of capital to foreign

countries since people lose confidence and faith over the monetary arrangements of the country, thereby resulting in a scarcity of resources. Finally, real value of tax revenue also declines under the impact of hyperinflation. Government then experiences a shortfall in investible resources.

Thus economists and policymakers are unanimous regarding the dangers of high price rise. But the consequence of hyperinflation are disastrous. In the past, some of the world economies (e.g., Germany after the First World War (1914-1918), Latin American countries in the 1980s) had been greatly ravaged by hyperinflation.

The German inflation of 1920s was also catastrophic:

During 1922, the German price level went up 5,470 per cent. In 1923, the situation worsened; the German price level rose 1,300,000,000 (1.3 billion) times. By October of 1923, the postage in the lightest letter sent from Germany to the United States was 200,000 marks. Butter cost 1.5 million marks per pound, meat 2 million marks, a loaf of bread 200,000 marks, and an egg 60,000 marks! Prices increased so rapidly that waiters changed the prices on the menu several times during the course of a lunch!! Sometimes, customers had to pay the double price listed on the menu when they observed it first!!! A photograph of the period shows a German housewife starting the fire in her kitchen stove with paper money and children playing with bundles of paper money tied together into building blocks!

(September 2008), Indian economy experienced an inflation rate of almost 13 p.c.—an unprecedented one over the last 16 or 17 years. However, an all-time record in price rise in India was struck in 1974-75 when it rose more than 25 p.c. Anyway, people are ultimately harassed by the high dose of inflation. That is why, it is said that 'inflation is our public enemy number one.' Rising inflation rate is a sign of failure on the part of the government.

UNIT 4

GLOBAL FINANCIAL SYSTEM

The global financial system is the worldwide framework of legal agreements, institutions, and both formal and informal economic actors that together facilitate international flows of financial capital for purposes of investment and trade financing. Since emerging in the late 19th century during the first modern wave of economic globalization, its evolution is marked by the establishment of central banks, multilateral treaties, and intergovernmental organizations aimed at improving the transparency, regulation, and effectiveness of international markets. In the late 1800s, world migration and communication technology facilitated unprecedented growth in international trade and investment. At the onset of World War I, trade contracted as foreign exchange markets became paralyzed by money market illiquidity. Countries sought to defend against external shocks with protectionist policies and trade virtually halted by 1933, worsening the effects of the global Great Depression until a series of reciprocal trade agreements slowly reduced tariffs worldwide. Efforts to revamp the international monetary system after World War II improved exchange rate stability, fostering record growth in global finance.

A series of currency devaluations and oil crises in the 1970s led most countries to float their currencies. The world economy became increasingly financially integrated in the 1980s and 1990s due to capital account liberalization and financial deregulation. A series of financial crises in Europe, Asia, and Latin America followed with contagious effects due to greater exposure to volatile capital flows. The global financial crisis, which originated in the United States in 2007, quickly propagated among other nations and is recognized as the catalyst for the worldwide Great Recession. A market adjustment to Greece's noncompliance with its monetary union in 2009 ignited a sovereign debt crisis among European nations known as the Eurozone crisis.

A country's decision to operate an open economy and globalize its financial capital carries monetary implications captured by the balance of payments. It also renders exposure to risks in international finance, such as political deterioration, regulatory changes, foreign exchange controls, and legal uncertainties for property rights and investments. Both individuals and groups may participate in the global financial system. Consumers and international businesses undertake consumption, production, and investment. Governments and intergovernmental bodies act as purveyors of international trade, economic development, and crisis management. Regulatory bodies establish financial regulations and legal procedures, while independent bodies facilitate industry supervision. Research institutes and other associations analyze data, publish reports and policy briefs, and host public discourse on global financial affairs.

While the global financial system is edging toward greater stability, governments must deal with differing regional or national needs. Some nations are trying to orderly discontinue unconventional monetary policies installed to cultivate recovery, while others are expanding their scope and scale. Emerging market policymakers face a challenge of precision as they must carefully institute sustainable macroeconomic policies during extraordinary market sensitivity without provoking investors to retreat their capital to stronger markets. Nations' inability to align interests and achieve international consensus on matters such as banking regulation has perpetuated the risk of future global financial catastrophes.

What is the 'Balance of Payments (BOP)'

The balance of payments is a statement of all transactions made between entities in one country and the rest of the world over a defined period of time, such as a quarter or a year.

BREAKING DOWN 'Balance of Payments (BOP)'

The balance of payments (BOP), also known as balance of international payments, summarizes all transactions that a country's individuals, companies and government bodies complete with individuals, companies and government bodies outside the country. These transactions consist of imports and exports of goods, services and capital, as well as transfer payments such as foreign aid and remittances.

A country's balance of payments and its net international investment position together constitute its international accounts.

The balance of payments divides transactions in two accounts: the current account and the capital account (sometimes the capital account is called the financial account, with a separate, usually very small, capital account listed separately). The current account includes transactions in goods, services, investment income and current transfers. The capital account, broadly defined, includes transactions in financial instruments and central bank reserves. Narrowly defined, it includes only transactions in financial instruments. The current account is included in calculcations of national output, while the capital account is not. (See also, *What Is the Balance of Payments?*)

The sum of all transactions recorded in the balance of payments must be zero, as long as the capital account is defined broadly. The reason is that every credit appearing in the current account has a corresponding debit in the capital account, and vice-versa. If a country exports an item (a current account credit), it effectively imports foreign capital when that item is paid for (a capital account debit).

If a country cannot fund its imports through exports of capital, it must do so by running down its reserves. This situation is often refered to as a balance of payments deficit, using the narrow definition of the capital account that excludes central bank reserves. In reality, however,

the broadly defined balance of payments must add up to zero by definition. In practice, statistical discrepancies arise due to the difficulty of accurately counting every transaction between an economy and the rest of the world.

Economic Policy

Balance of payments and international investment position data are critical in formulating national and international economic policy. Certain aspects of the balance of payments data, such as payment imbalances and foreign direct investment, are key issues that a nation's policymakers seek to address.

Economic policies are often targeted at specific objectives that, in turn, impact the balance of payments. For example, one country might adopt policies specifically designed to attract foreign investment in a particular sector, while another might attempt to keep its currency at an artificially low level in order to stimulate exports and build up its currency reserves. The impact of these policies is ultimately captured in the balance of payments data.

Imbalances Between Countries

While a nation's balance of payments necessarily zeroes out the current and capital accounts, imbalances can and do appear between different countries' current accounts. According to the World Bank, the U.S. had the world's largest current account deficit in 2016, at $481.2 billion. Germany had the world's largest surplus, at $289.2 billion.

Such imbalances can generate tensions between countries: Donald Trump campaigned on a platform of reversing the U.S.'s trade deficits, particularly with Mexico and China. The Economist argued in 2017 that Germany's surplus "puts unreasonable strain on the global trading system," since "to offset such surpluses and sustain enough aggregate demand to keep people in work, the rest of the world must borrow and spend with equal abandon."