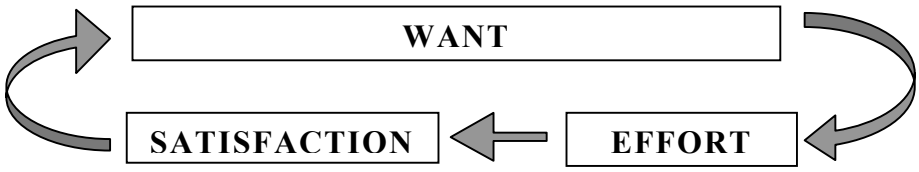
01. ECONOMICS – DEFINITION AND NATURE & SCOPE OF ECONOMICS – DIVISIONS OF ECONOMICS

Economics is the science that deals with production, exchange and consumption of various commodities in economic systems. It shows how scarce resources can be used to increase wealth and human welfare. The central focus of economics is on scarcity of resources and choices among their alternative uses. The resources or inputs available to produce goods are limited or scarce. This scarcity induces people to make choices among alternatives, and the knowledge of economics is used to compare the alternatives for choosing the best among them. For example, a farmer can grow paddy, sugarcane, banana, cotton etc. in his garden land. But he has to choose a crop depending upon the availability of irrigation water.

Two major factors are responsible for the emergence of economic problems. They are: i) the existence of unlimited human wants and ii) the scarcity of available resources. The numerous human wants are to be satisfied through the scarce resources available in nature. Economics deals with how the numerous human wants are to be satisfied with limited resources. Thus, the science of economics centres on **want - effort - satisfaction.**



Economics not only covers the decision making behaviour of individuals but also the macro variables of economies like national income, public finance, international trade and so on.

A. DEFINITIONS OF ECONOMICS

Several economists have defined economics taking different aspects into account. The word 'Economics' was derived from two Greek words, *oikos* (a house) and *nemein* (to manage) which would mean 'managing an household' using the limited funds available, in the most satisfactory manner possible.

i) Wealth Definition

Adam smith (1723 - 1790), in his book “An Inquiry into Nature and Causes of Wealth of Nations” (1776) defined economics as the science of wealth. He explained how a nation’s wealth is created. He considered that the individual in the society wants to promote only his own gain and in this, he is led by an “invisible hand” to promote the interests of the society though he has no real intention to promote the society’s interests.

Criticism: Smith defined economics only in terms of wealth and not in terms of human welfare. Ruskin and Carlyle condemned economics as a ‘dismal science’, as it taught selfishness which was against ethics. However, now, wealth is considered only to be a mean to end, the end being the human welfare. Hence, wealth definition was rejected and the emphasis was shifted from ‘wealth’ to ‘welfare’.

ii) Welfare Definition

Alfred Marshall (1842 - 1924) wrote a book “Principles of Economics” (1890) in which he defined “Political Economy” or Economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of well being”. The important features of Marshall’s definition are as follows:

a) According to Marshall, economics is a study of mankind in the ordinary business of life, i.e., economic aspect of human life.

b) Economics studies both individual and social actions aimed at promoting economic welfare of people.

c) Marshall makes a distinction between two types of things, viz. material things and immaterial things. Material things are those that can be seen, felt and touched, (E.g.) book, rice etc. Immaterial things are those that cannot be seen, felt and touched. (E.g.) skill in the operation of a thrasher, a tractor etc., cultivation of hybrid cotton variety and so on. In his definition, Marshall considered only the material things that are capable of promoting welfare of people.

Criticism: a) Marshall considered only material things. But immaterial things, such as the services of a doctor, a teacher and so on, also promote welfare of the people.

b) Marshall makes a distinction between (i) those things that are capable of promoting welfare of people and (ii) those things that are not capable of promoting welfare of people. But anything, (E.g.) liquor, that is not capable of promoting welfare but commands a price, comes under the purview of economics.

c) Marshall's definition is based on the concept of welfare. But there is no clear-cut definition of welfare. The meaning of welfare varies from person to person, country to country and one period to another. However, generally, welfare means happiness or comfortable living conditions of an individual or group of people. The welfare of an individual or nation is dependent not only on the stock of wealth possessed but also on political, social and cultural activities of the nation.

iii) Welfare Definition

Lionel Robbins published a book "An Essay on the Nature and Significance of Economic Science" in 1932. According to him, "economics is a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses". The major features of Robbins' definition are as follows:

a) Ends refer to human wants. Human beings have unlimited number of wants.

b) Resources or means, on the other hand, are limited or scarce in supply. There is scarcity of a commodity, if its demand is greater than its supply. In other words, the scarcity of a commodity is to be considered only in relation to its demand.

c) The scarce means are capable of having alternative uses. Hence, anyone will choose the resource that will satisfy his particular want. Thus, economics, according to Robbins, is a science of choice.

Criticism: a) Robbins does not make any distinction between goods conducive to human welfare and goods that are not conducive to human welfare. In the production of rice and alcoholic drink, scarce resources are used. But the production of rice promotes human welfare while production of alcoholic drinks is not conducive to human welfare. However, Robbins concludes that economics is neutral between ends.

b) In economics, we not only study the micro economic aspects like how resources are allocated and how price is determined, but we also study the macro economic aspect like how national income is generated. But, Robbins has

reduced economics merely to theory of resource allocation.

c) Robbins definition does not cover the theory of economic growth and development.

iv) Growth Definition

Prof. Paul Samuelson defined economics as "the study of how men and society choose, with or without the use of money, to employ scarce productive resources which could have alternative uses, to produce various commodities over time, and distribute them for consumption, now and in the future among various people and groups of society".

The major implications of this definition are as follows:

a) Samuelson has made his definition dynamic by including the element of time in it. Therefore, it covers the theory of economic growth.

b) Samuelson stressed the problem of scarcity of means in relation to unlimited ends. Not only the means are scarce, but they could also be put to alternative uses.

c) The definition covers various aspects like production, distribution and consumption.

Of all the definitions discussed above, the 'growth' definition stated by Samuelson appears to be the most satisfactory. However, in modern economics, the subject matter of economics is divided into main parts, viz., i) Micro Economics and ii) Macro Economics.

Economics is, therefore, rightly considered as the study of allocation of scarce resources (in relation to unlimited ends) and of determinants of income, output, employment and economic growth.

B. SCOPE OF ECONOMICS

Scope means province or field of study. In discussing the scope of economics, we have to indicate whether it is a science or an art and a positive science or a normative science. It also covers the subject matter of economics.

i) Economics - A Science and an Art

a) Economics is a science: Science is a systematized body of knowledge that traces the relationship between cause and effect. Another attribute of science is that its phenomena should be amenable to measurement. Applying these characteristics, we find that economics is a branch of knowledge where the various facts relevant to it have been systematically collected, classified and analyzed. Economics investigates the possibility of deducing generalizations as regards the economic motives of human beings. The motives of individuals and business firms can be very easily measured in terms of money. Thus, economics is a science.

Economics - A Social Science: In order to understand the social aspect of economics, we should bear in mind that labourers are working on materials drawn from all over the world and producing commodities to be sold all over the world in order to exchange goods from all parts of the world to satisfy their wants. There is, thus, a close inter-dependence of millions of people living in distant lands unknown to one another. In this way, the process of satisfying wants is not only an individual process, but also a social process. In economics, one has, thus, to study social behaviour i.e., behaviour of men in-groups.

b) Economics is also an art. An art is a system of rules for the attainment of a given end. A science teaches us to know; an art teaches us to do. Applying this definition, we find that economics offers us practical guidance in the solution of economic problems. Science and art are complementary to each other and economics is both a science and an art.

ii) Positive and Normative Economics

Economics is both positive and normative science.

a) Positive science: It only describes what it is and normative science prescribes what it ought to be. Positive science does not indicate what is good or what is bad to the society. It will simply provide results of economic analysis of a problem.

b) Normative science: It makes distinction between good and bad. It prescribes what should be done to promote human welfare. A positive statement is based on facts. A normative statement involves ethical values. For example, “12 per cent of the labour force in India was unemployed last year” is a positive statement, which could is verified by scientific measurement. “Twelve per cent

unemployment is too high" is normative statement comparing the fact of 12 per cent unemployment with a standard of what is unreasonable. It also suggests how it can be rectified. Therefore, economics is a positive as well as normative science.

iii) Methodology of Economics

Economics as a science adopts two methods for the discovery of its laws and principles, viz., (a) deductive method and (b) inductive method.

a) Deductive method: Here, we descend from the general to particular, i.e., we start from certain principles that are self-evident or based on strict observations. Then, we carry them down as a process of pure reasoning to the consequences that they implicitly contain. For instance, traders earn profit in their businesses is a general statement which is accepted even without verifying it with the traders. The deductive method is useful in analyzing complex economic phenomenon where cause and effect are inextricably mixed up. However, the deductive method is useful only if certain assumptions are valid. (Traders earn profit, if the demand for the commodity is more).

b) Inductive method: This method mounts up from particular to general, i.e., we begin with the observation of particular facts and then proceed with the help of reasoning founded on experience so as to formulate laws and theorems on the basis of observed facts. E.g. Data on consumption of poor, middle and rich income groups of people are collected, classified, analyzed and important conclusions are drawn out from the results.

In **deductive** method, we start from certain principles that are either indisputable or based on strict observations and draw inferences about individual cases. In **inductive** method, a particular case is examined to establish a general or universal fact. Both deductive and inductive methods are useful in economic analysis.

iv) Subject Matter of Economics

Economics can be studied through a) traditional approach and (b) modern approach.

a) Traditional Approach: Economics is studied under five major divisions namely consumption, production, exchange, distribution and public finance.

1.Consumption: The satisfaction of human wants through the use of goods and services is called consumption.

2.Production: Goods that satisfy human wants are viewed as "bundles of utility". Hence production would mean creation of utility or producing (or creating) things for satisfying human wants. For production, the resources like land, labour, capital and organization are needed.

3. Exchange: Goods are produced not only for self-consumption, but also for sales. They are sold to buyers in markets. The process of buying and selling constitutes exchange.

4. Distribution: The production of any agricultural commodity requires four factors, viz., land, labour, capital and organization. These four factors of production are to be rewarded for their services rendered in the process of production. The land owner gets rent, the labourer earns wage, the capitalist is given with interest and the entrepreneur is rewarded with profit. The process of determining rent, wage, interest and profit is called distribution.

5. Public finance: It studies how the government gets money and how it spends it. Thus, in public finance, we study about public revenue and public expenditure.

b) Modern Approach

The study of economics is divided into: i) Microeconomics and ii) Macroeconomics.

1. Microeconomics analyses the economic behaviour of any particular decision making unit such as a household or a firm**.** Microeconomics studies the flow of economic resources or factors of production from the households or resource owners to business firms and flow of goods and services from business firms to households. It studies the behaviour of individual decision making unit with regard to fixation of price and output and its reactions to the changes in demand and supply conditions. Hence, microeconomics is also called price theory.

2. Macroeconomics studies the behaviour of the economic system as a whole or all the decision-making units put together. Macroeconomics deals with the behaviour of aggregates like total employment, gross national product (GNP), national income, general price level, etc. So, macroeconomics is also known as income theory.

Microeconomics cannot give an idea of the functioning of the economy as a whole. Similarly, macroeconomics ignores the individual's preference and

welfare. What is true of a part or individual may not be true of the whole and what is true of the whole may not apply to the parts or individual decision-making units. By studying about a single small-farmer, generalization cannot be made about all small farmers, say in Tamil Nadu state. Similarly, the general nature of all small farmers in the state need not be true in case of a particular small farmer. Hence, the study of both micro and macroeconomics is essential to understand the whole system of economic activities.

2 Economic Decision Making

Good fortune has come your way. After several weeks of interviewing, you have received job offers from three firms. The offers differ greatly, which leaves you quite confused. You have made this list of the offers:

1. Large national firm, $12 per hour starting wage, life insurance and dental benefits paid by the company, a two-week paid vacation each year, and potential for rapid advancement.
2. Small local firm, $20 per hour starting wage, life insurance and dental benefits available but you must pay the premiums, a two-week paid vacation each year, share options and pension plan benefits, and potential for advancement.
3. Regional firm, $15 per hour starting wage, full life insurance and dental benefits, one-week paid vacation, good pension plan, and moderate advancement potential.

Will you consider the short run or the long run for this decision? Which offer provides you with the most today and which one the most over the next five years? What is the real economic value of the benefits? Aside from the monetary considerations, do you like the work you will perform in each position and the people with whom you will work? How do you organize your thoughts to make this decision?

Regardless of the form of organization or the business activity, success in the world of business—sometimes even survival—depends on making wise economic decisions. A key ingredient is an understanding of the decision-making process itself. Because economic decision making relies heavily on accounting information, it is crucial for that information to be useful to economic decision makers.

Life is a never-ending sequence of decisions, some very complex and others relatively simple. Because we cannot know the future, we strive to reduce uncertainty in any decision by collecting as much information as possible. We designed this chapter to help you learn a logical decision-making process. ■

Learning Objectives

After completing your work on this chapter, you should be able to do the following:

1. Explain the concepts of extrinsic and intrinsic rewards, sacrifices, and opportunity costs as they pertain to decision situations.
2. Describe the two types of economic decision makers and explain the basic differences between management accounting and financial accounting.
3. List the three questions all economic decision makers attempt to answer and explain why these questions are so important.
4. Describe the importance of cash as a measure of business success or failure.
5. Define accounting information and distinguish it from accounting data.
6. Describe the qualitative characteristics of useful accounting information and apply them in decision-making situations.
7. Explain the difference between reality and the measurement of reality.
8. Apply the criteria for revenue and expense recognition under the cash basis of accounting to determine periodic net income.
9. Apply the criteria for revenue and expense recognition under the accrual basis of accounting to determine periodic net income.

What Is Decision Making?

Decision making is the process of identifying alternative courses of action and selecting an appropriate alternative in a given decision situation. This definition presents two important parts:

1. *Identifying alternative courses of action* means that an ideal solution may not exist or might not be identifiable.
2. *Selecting an appropriate alternative* implies that there may be a number of appropriate alternatives and that inappropriate alternatives are to be evaluated and rejected. Thus, judgment is fundamental to decision making.

Choice is implicit in our definition of decision making. We may not like the alternatives available to us, but we are seldom left without choices.

Rewards and Sacrifices: The Trade-off

In general, the aim of all decisions is to obtain some type of reward, either economic or personal. Reward requires sacrifice. When you made the decision to attend college or university, for example, you certainly desired a reward. What was the sacrifice?

Discussion Questions

2–1. What reward or rewards do you hope to obtain by attending college or university?

2–2. What sacrifices are you personally making to attend college or university ?

Think of some things you cannot do because you are attending college. Some sacrifices cannot be measured in dollars (such as loss of sleep, lack of home-cooked meals, and loss of leisure time). Some, however, can be measured. Suppose that instead of attending college you could work full time and earn $15,000 a year. Attending college, therefore, costs you that $15,000, in addition to what you pay for tuition and books. We call the $15,000 an opportunity cost of making the decision to attend college. An **opportunity cost** is the reward we forego because we choose a particular alternative instead of another. Most decisions include opportunity costs.

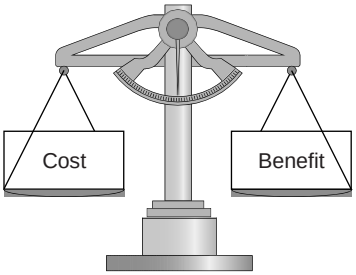
opportunity cost The benefit or benefits forgone by not selecting a particular alternative. Once an alternative is selected in a decision situation, the benefits of all rejected alternatives become part of the opportunity cost of the alternative selected.

Decision makers want the reward or benefit from a decision to be greater than the sacrifice or cost required to attain it (see Exhibit 2–1). Examining the relationship between rewards and sacrifices is known as **cost/benefit analysis.** In a condition of absolute certainty, in which the outcome of a decision is known without doubt, cost/benefit analysis provides a certain outcome. Unfortunately, absolute certainty rarely, if ever, exists.

cost/benefit analysis Deals with the trade-off between the rewards of selecting a given alternative and the sacrifices required to obtain those rewards.

In examples that accountants use to describe the trade-off between rewards and sacrifices, money is usually the reward. Money is an *extrinsic reward,* meaning that it comes from outside ourselves and is a tangible object we can acquire. An *intrinsic reward* is one that comes from inside ourselves. When you accomplish a difficult task, the intrinsic reward comes from the sense of satisfaction you feel. An old adage says, "The best things in life are free." Not so! Anything worth having requires sacrifice.

Exhibit 2–1
Cost versus Benefit



Discussion Questions

2–3. What is the one thing you desire most from life? What sacrifices must you make to obtain it?

2–4. What sacrifice does a business owner make when purchasing machinery for the production plant?

2–5. What benefit does the owner derive from the sacrifice to purchase the machinery?

ECONOMIC DECISION MAKING

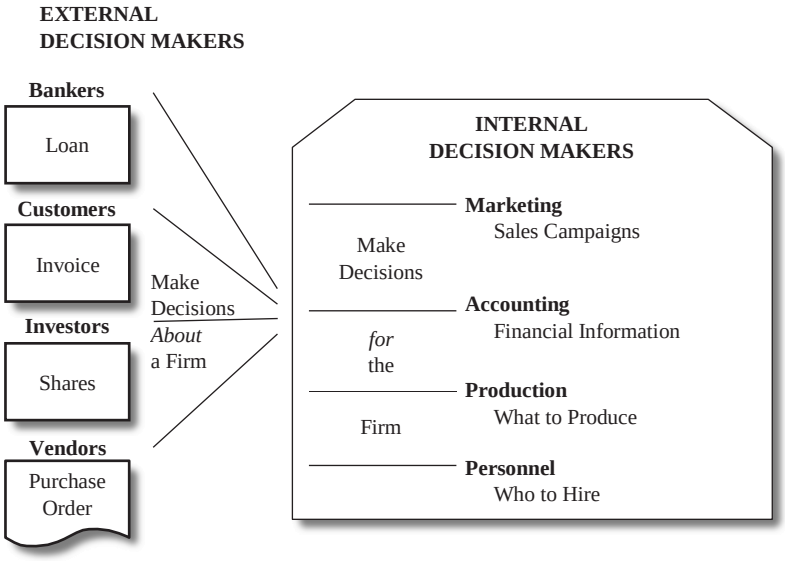
internal decision makers Economic decision makers within a company who make decisions for the company. They have access to much or all of the accounting information generated within the company.

external decision makers Economic decision makers outside a company who make decisions about the company. The accounting information they use to make those decisions is limited to what the company provides to them.

Economic decision making, in this book, refers to the process of making business decisions involving money. All economic decisions of any consequence require the use of some sort of accounting information, often in the form of financial reports. Anyone using accounting information to make economic decisions must understand the business and economic environment in which accounting information is generated, and they must also be willing to devote the necessary time and energy to make sense of the accounting reports.

Economic decision makers are either internal or external. **Internal decision makers** are individuals within a company who make decisions on behalf of the company, while **external decision makers** are individuals or organizations outside a company who make decisions that affect the company. Exhibit 2-2 illustrates some decisions made by internal and external decision makers.

Exhibit 2–2
External vs. Internal Decision Makers



Internal Decision Makers

Internal decision makers decide whether the company should sell a particular product, whether it should enter a certain market, and whether it should hire or fire employees. Note that in all these matters, the responsible internal decision maker makes the decision not for himself or herself, but rather for *the company*.

Depending on their position within the company, internal decision makers may have access to much, or even all, of the company's financial information. They do not have complete information, however, because all decisions relate to the future and always involve unknowns.

External Decision Makers

External decision makers make decisions *about* a company. External decision makers decide whether to invest in the company, whether to sell to or buy from the company, and whether to lend money to the company.

Unlike internal decision makers, external decision makers have limited financial information on which to base their decisions about the company. In fact, they have only the information the company gives them—which in most cases is not all the information the company possesses.

Discussion Questions

2–6. Identify a particular company (large or small). Who do you think are considered internal and external economic decision makers of the company?

2–7. For what reasons do you think a company would withhold certain financial information from external parties?

2–8. Is it ethical for a company to limit the information available to internal decision makers? External decision makers?

The decisions made by internal and external decision makers are similar in some ways, but so different in other ways that the accounting profession developed two separate branches of accounting to meet the needs of the two categories of users. **Management accounting** is not constrained by GAAP and generates information for use by internal decision makers, whereas **financial accounting** is constrained by GAAP and generates information for use by external parties.

management accounting The branch of accounting developed to meet the informational needs of internal decision makers.

financial accounting The branch of accounting developed to meet the informational needs of external decision makers.

What All Economic Decision Makers Want to Know

Although internal and external parties face different decision situations, both attempt to predict the future, as do all decision makers. Specifically, all economic decision makers attempt to predict future **cash flow**—the movement of cash in and out of a company. So one of the major objectives of financial reporting is to provide helpful information to those trying to predict cash flows.

cash flow The movement of cash in and out of a company.

The difference between cash inflows and cash outflows is **net cash flow.** Positive net cash flow indicates that the amount of cash flowing into the company exceeds the amount flowing out of the company during a particular period. For example, a company that collects $1,000,000 during a period when it pays out $950,000 has a positive cash flow of $50,000. Negative net cash flow indicates that the amount of cash flowing out of the company exceeds the amount flowing into the company during a particular period (see Exhibit 2–3).

net cashflow The difference between cash inflows and cash outflows; it can be either positive or negative.

Exhibit 2–3
Cash Flow

Cash inflow	–	Cash outflow	=	Positive net cash flow
$1,000,000	–	$950,000	=	$50,000
Cash inflow	–	Cash outflow	=	Negative net cash flow
$ 500,000	–	$575,000	=	– $75,000

All economic decisions involve attempts to predict the future of cash flows by searching for the answers to the following three questions:

1. *Will I be paid?*
   This question refers to the *uncertainty* of cash flows.
2. *When will I be paid?*
   This question refers to the *timing* of cash flows.
3. *How much will I be paid?*
   This question refers to the *amounts* of cash flows.

The answer to each question contains two parts: return *on* investment and return *of* investment. Return on investment consists of the earnings and profits an investment returns to the investor. Return of investment is the ultimate return of the principal invested. Exhibit 2–4 shows the conceptual link between the three major questions posed by economic decision makers and the resulting cash flows using the following example. Assume you wish to invest in a $1,000 term deposit at your bank, which will earn 10 percent interest per year, payable every three months, over the course of two years. If you invest in this term deposit, you must hold it for two years, after which the bank will return your $1,000.

Exhibit 2–4
Three Big Questions for Economic Decision Makers

		Cash Outcome	
Questions	**Concepts**	**Return *on* Investment**	**Return *of* Investment**
1. Will I be paid?	Uncertainty	Interest	Term deposit maturity
2. When will I be paid?	Timing	Quarterly	2 years
3. How much will I be paid?	Amount	$25 per quarter Total of $200	$1,000

Before you make this economic decision, you must attempt to answer the three questions:

1. *Will you be paid?* Because it is impossible to know the future, making an economic decision always involves risk. However, assuming the economy does not collapse and the bank stays in business, you will be paid both your return on investment and your return of investment.
2. *When will you be paid?* You will receive an interest payment every three months for two years (return on investment), and then you will receive your initial $1,000 investment back (return of investment).
3. *How much will you be paid?* The return on your investment is the interest you receive quarterly of $25 ($1,000 × 10 percent × 3/12), and the return of your investment is the $1,000 the bank gives you back. The total received in interest in two years is $200 (8 × $25).

Initial Investment		$1,000
Return on Investment	$ 200	
Return of Investment	1,000	
Total Return		1,200
Profit on Investment		$ 200

We can answer these questions easily for the insured term deposit. In the vast majority of economic decision situations, the answers to the three questions we asked are much less certain. We will show you how to use accounting information to answer them in various economic decision situations throughout this text.

Discussion Questions

2–9. Assume that you are a lender with three customers who wish to borrow $10,000. You can lend to only one of them. What information would you require each of them to present for you to answer the three questions? How would you make your decision?

Cash Is the "Ball" of Business

If business were any game such as baseball, football, or soccer, then cash would be the ball. To be successful, the players must keep their eye on the ball. Because the business game is so complex, businesspeople easily become distracted and lose sight of (the ball) cash. Various measures of performance such as gross profit, net income, net worth, and equity help those in business to make economic decisions. These are important measures of financial performance, but they are not cash! Never allow yourself to become so focused on any of them that you lose sight of cash, because when a company runs out of cash, it dies. Only cash pays the bills that keeps the company in business. The secret to becoming a street-smart user of accounting information is learning to balance the complexity of business with the simple rule of keeping your eye on cash flow.

ACCOUNTING INFORMATION

A company or a person generates accounting data with every business transaction. You generate a number of transactions each month when you pay your rent, buy groceries, make car payments, lend money to a friend, and so on. In fact, the volume of business accounting data can be staggering.

Data versus Information

accounting information Raw data concerning transactions that have been transformed into financial numbers that can be used by economic decision makers.

information Data that have been transformed so that they are useful in the decision-making process.

Accounting data and **accounting information** are not interchangeable terms. Data are the raw results of transactions: data become **information** only when they are put into some useful form. Consider this example:

Carol Brown, vice president of sales for Balloo Industries, noticed that the recent gasoline expense for the sales staff's company cars was extremely high and she suspected that salespersons were using the company cars for personal trips. Knowing that sales personnel were required to keep detailed odometer records, she notified Jack Parsons, the sales supervisor, of her concerns. He agreed to prepare a report to provide her with the necessary information to determine if the expense was proper.

The report compiled by Mr. Parsons consisted of five columns of data:

1. salesperson's name;
2. make and model of that salesperson's company car;
3. date the car was issued to the salesperson;
4. odometer reading on the date of issue; and
5. odometer reading at time of most recent maintenance.

Ms. Brown quickly concluded that it contained little useful information. She told Parsons that she was trying to determine if any members of the sales force were using company cars for personal activities. Mr. Parsons retreated to his office to try again.

In his second attempt, Parsons included the previous five columns plus four additional columns:

6. sales region covered;
7. how long the salesperson had been with the company;
8. total sales generated by the salesperson this year; and
9. current odometer reading of the vehicle.

Was Ms. Brown pleased with the second version? No! Mr. Parsons had provided additional data, but no additional information.

Discussion Question

2–10. Evaluate the usefulness to Ms. Brown of each column (1–9) of Parsons' data. What information could Parsons have provided Ms. Brown to help her make a determination?

Clearly, the correct data items must be gathered and converted into useful information before they are of any help to economic decision makers. Suppose you consider investing in shares of Dofasco Inc., the steel producer. You call your broker and she tells you the shares are currently selling at $30 per share. Do you want to invest? Although your broker has given you a datum (singular form of data), this datum provides insufficient information upon which to base a buying decision. You need to know something about the company's current and historic earnings, the share price behaviour over the past year, the steel industry's prospects, and so on. That is why brokerage firms such as RBC Dominion Securities, Scotia Capital, and TD Securities have research departments that extract such data and synthesize them into useful information for their clients.

Useful Accounting Information

The user of accounting information has the obligation to understand the business and be willing to study the information. The information provider has an obligation to present it in such a way that economic decision makers can make sense of it. As business and economic activities have become more complex, however, the accounting profession has responded with increasingly complex rules, many of which are difficult for nonaccountants to comprehend. There are certain characteristics that accounting information must possess to be considered useful for decision making. If the accounting profession does not provide what the information users need or does not prepare it in a way that makes sense, users must demand a change. Users and preparers must be mindful of the benefits provided by information, and the costs incurred to secure it (the cost/benefit analysis), and of its ultimate ability to make a difference in the decision (the **materiality** test).

materiality Something that will influence the judgment of a reasonable person.

Two parties decide what accounting information is useful and what is not. One is the users and the second is the accounting profession through the CICA. The CICA focuses on the *qualitative characteristics* of useful accounting information—

those qualities it must possess to be useful, whether it is financial or management accounting information.

Qualitative Characteristics of Accounting Information

relevance One of the two primary qualitative characteristics of useful accounting information. It means the information must have a bearing on a particular decision situation.

reliability One of the two primary qualitative characteristics of useful accounting information. It means the information must be reasonably accurate.

timeliness A primary characteristic of relevance. To be useful, accounting information must be provided in time to influence a particular decision.

predictive value A primary characteristic of relevance. To be useful, accounting must provide information to decision makers that can be used to predict the future and timing of cash flows.

feedback value A primary characteristic of relevance. To be useful, accounting must provide decision makers with information that allows them to assess the progress of an investment.

verifiability A primary characteristic of reliability. Information is considered verifiable if several individuals, working independently, would arrive at similar conclusions using the same data.

representational faithfulness A primary characteristic of reliability. To be useful, accounting information must reasonably report what actually happened.

The two primary qualities that distinguish useful accounting information are **relevance** and **reliability.** If either of these qualities is missing, accounting information will not be useful.

Relevance

To be considered relevant, accounting information must have a bearing on the particular decision situation. In other words, does it make a difference to decision makers? The accuracy of the information is not important if the content does not matter to the decision being made.

Relevant accounting information possesses at least two characteristics:

- **Timeliness.** If information providers delay making information available until every number is perfectly accurate, it may be too late to be of any value. This does not mean that accuracy does not matter. But if accounting information is not timely, it has no value.

Timeliness alone, however, is not enough. To be relevant, accounting information must also possess at least one of the following characteristics:

- **Predictive Value.** Before economic decision makers commit resources to one alternative instead of another, they must satisfy themselves that a reasonable expectation of a return on investment and a return of investment exists. Accounting information that helps reduce the uncertainty of that expectation has predictive value.

or

- **Feedback Value.** After making an investment decision, the decision maker must have information to assess the progress of that investment. The decision maker might want to reevaluate the decision if new information becomes available and would centainly want to evaluate of the final outcome of the decision. If accounting information provides input for those evaluations, it has feedback value.

Reliability

To be considered reliable, accounting information must possess four qualities:

- **Verifiability.** We consider accounting information verifiable if several qualified persons, working independently of one another, would arrive at similar conclusions using the same data. For example, if we asked several people to determine the amount of Michael Simpson's wages this year, they should all come to the same conclusion: A simple review of payroll records should provide verifiable information for the amount.
- **Representational Faithfulness.** There must be agreement between what the accounting information says and what really happened. If a company's accounting information reports sales revenue of $1,000 and the company really

had sales revenue of $1,000, the accounting information is representationally faithful. However, if a company's accounting information reports sales revenue of $1,000 and the company really had sales revenue of only $800, then the accounting information lacks representational faithfulness.

neutrality A primary characteristic of reliability. To be useful, accounting information must be free of bias.

- **Neutrality.** To be useful, accounting information must be free of bias, which means accountants should not omit details simply because the information is unpleasant. We have stressed how difficult it is to make good decisions. The problem becomes even worse when information is suppressed or slanted, either positively or negatively. The need to remain neutral is one of the most difficult challenges facing the accounting profession.

conservatism A characteristic of reliability. In times of uncertainty, it is better to underestimate the wealth and income of a business rather than overestimate it.

- **Conservatism.** There are times when the concept of neutrality needs to be altered. These times generally occur under conditions of uncertainty, when there can be no objective, verifiable method of determining the valuation of assets or revenues. In this case it is better to understate their value rather than risk overstating it. This applies conversely with liabilities and expenses. When in doubt, it is better to overstate the liability or expense. This does not mean you deliberately misrepresent the value of these items; rather, it is better to understate the wealth and net income of a business than overstate it.

Comparability and Consistency

Two secondary qualities of useful accounting information are comparability and consistency. Economic decision makers evaluate alternatives. Accounting information for one alternative must therefore be comparable to accounting information for the others. For example, assume you intend to make an investment in one of two companies. If each company uses different accounting methods, you would find it very difficult to make a useful comparison.

Now consider the concept of consistency. Imagine how difficult it would be to assess the progress of an investment if, through the years, different accounting treatments were applied to similar events. Consistency in the application of measurement methods over periods of time increases the usefulness of the accounting information provided about a company or an investment alternative.

Comparability is a quality of information from different entities or alternatives. Consistency describes information from the same source over time. Comparability and consistency often have similar effects on the decision-making process. Their presence increases the decision maker's confidence in his or her decision. The absence of these qualities decreases the decision maker's confidence or confounds the decision maker's ability to make a decision.

Reality versus the Measurement of Reality

A firm performs the following four functions:

1. it operates to produce revenues,
2. it invests resources to enable it to operate,
3. it finances its operations and investments from internal and external sources, and
4. it makes decisions.

These activities constitute the reality of conducting business. Reality happens every moment of the business day. To keep records of business transactions, the firm's officers must measure the reality of each event. But remember this: *No matter how accurately the measurement of reality reflects that reality, it is not the reality.*

To illustrate this concept, think of a person giving testimony in court. A court reporter records the exact words uttered by the witness and the transcript accurately measures the reality of the words spoken. If Rob reads the trial transcript and Keri hears the testimony in court, could Rob and Keri draw different conclusions about the substance of the testimony?

Discussion Questions

2–11. What is the difference between the transcript testimony and the actual testimony?

2–12. Is there any other measurement of the testimony that might better reflect the reality of the testimony?

Errors in measurement create more distortion between reality and the measurement of reality. Assume Laura's Business purchased some office supplies and wrote a cheque for $480. In recording the cheque in the cheque register, the accountant read the amount of the cheque incorrectly and entered $48. After the $48 was deducted, the cheque register indicated a balance of $1,127. However, the fact that the accountant entered the wrong amount for the cheque in no way changes the reality of how much money was spent and how much actually remains in the company's chequing account.

Discussion Questions

2–13. Assuming the accountant made no other errors in the check register, what is the actual cash balance in Laura's Business's chequing account?

2–14. In what ways could this incorrect measurement of reality have an effect on reality? Explain.

We can easily grasp the concept that errors may cause differences between reality and the measurement of reality. Many people, however, find it difficult to understand that sometimes perfectly legitimate differences exist between reality and its measure. This discrepancy can best be demonstrated in the measurement of the revenues and expenses to be reported in the income statement of a company for a particular time period.

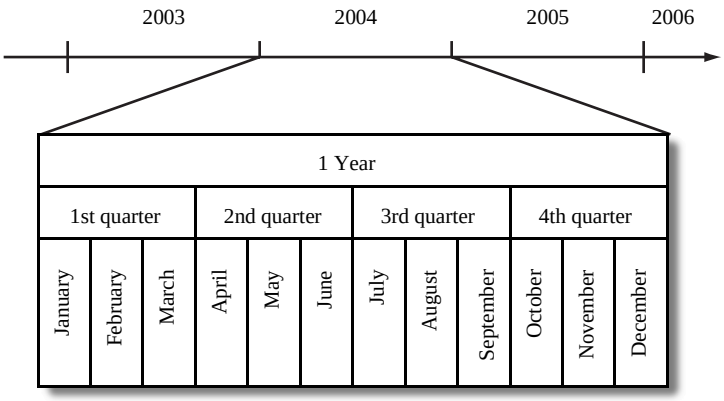
The Problems of Periodic Measurement

periodicity The assumption that the economic activities of an entity can be traced to some specific time period and results of those activities can be reported for any arbitrary time period chosen.

Most discrepancies between reality and its measurement occur when earnings activities are measured for a specific period of time (Exhibit 2–5). An accounting assumption of the conceptual framework, called **periodicity,** states that the economic activities of an entity can be traced to some specific time period and the results of those activities can be reported for any arbitrary time period. The assumption is often easier to understand than the practice of determining which

revenues and which expenses should be included in the earnings (net income) of a particular period (month, quarter, or year). In fact, the only final measure of net income for a company is a comparison between revenues and expenses over the entire life of that company.

Exhibit 2–5
Periodic Measurement



In some ways, determining net income in the fifteenth century was easier and more precise than it is today. In the era of Christopher Columbus, if an entrepreneur planned to sail to the New World and bring back goods to sell, the net income for that particular venture could be measured. The entrepreneur began with a sum of money. With those funds, he bought a ship and supplies and hired men to help with the expedition. The group would set sail, gather treasures and commodities from the New World, return, and sell the goods. Then the entrepreneur paid the workers, sold the ship, and counted the money. If the ending money exceeded the beginning funds, the difference was a net income. If the beginning money exceeded the ending funds, the entrepreneur suffered a loss on the venture.

In today's world, it is unrealistic to expect a company to stop operations and sell off all its assets to determine its "true" net income. So although lifetime net income is the only precise measurement of an operation's success or failure, users of accounting information demand current information every year, or quarter, or month. Only the need to artificially break the company's operations into various time periods requires us to make decisions about when revenues and expenses should be reported.

recognition The process of recording an event in the accounting records and reporting it on the financial statements.

revenue An accounting element representing the inflows of assets as a result of an entity's ongoing major or central operations. This is the reward for doing business.

expense An accounting element representing the outflow of assets resulting from an entity's ongoing major or central operations. This is the sacrifice required to attain the rewards (revenues) of doing business.

Revenue and Expense Recognition

In accounting, the term **recognition** has a very specific meaning. It refers to the process of (1) *recording* in the books and (2) *reporting* on the financial statements.

The problem of when to recognize an item applies to all the accounting elements that we will discuss. The greatest difficulties, however, occur in deciding when to recognize revenues and expenses.

What exactly *is* revenue? **Revenue** is an accounting element representing the inflows of assets as a result of an entity's ongoing major or central operations. In other words, it is the reward for doing business. Revenue may simply be described as the increase in wealth from engaging in a particular business transaction. Alternatively, **expense** is an accounting element representing the outflow of assets resulting from an entity's ongoing major or central operations (the sacrifice to generate revenue). Examples of expenses include salaries, rent, insurance, and advertising. An expense can therefore be thought of as a decrease in the wealth of a business. All businesses exist to generate revenues (and to avoid expenses).

The net income (or loss) of a business is the difference between the revenues generated and expenses incurred over a particular period of time. All revenues and their related expense activities must be recorded in the same fiscal period by the business to arrive at a reliable net income figure. Chapter 5 will describe the process of calculating net income in greater detail. But for now, remember the following equation:

Revenue — Expenses = Net Income (or Net Loss)

When should a revenue be recognized? When should an expense be recognized? These are two difficult questions, for which there are no perfect answers. The accounting establishment had to set criteria to determine when to recognize accounting elements, particularly revenues and expenses. Over time, the accounting profession developed several different recognition systems, each attempting to find some rational basis for the measurement of revenue and expense in a particular time period.

Discussion Questions

2–15. Revenue is defined as the reward of doing business. At what point in the cycle of sales, from the customer's order point to the seller's delivery to the customer, do you think a sale should be recognized as revenue? Explain.

2–16. If an expense is defined as the sacrifice necessary to obtain a revenue, at what point in the sales cycle do you think an expense incurred to make a sale should be recognized? Explain.

Bases of Economic Measurement

There are two basic approaches to recording economic activity. Each presents a different measurement of reality. Each depicts a different, but important, version of the measurement of accounting elements, especially revenues and expenses.

We will use a single set of data to illustrate the two bases of measurement. Consider the following information concerning McCumber Enterprises (a proprietorship) for January 2004:

1. Gertie McCumber started the company on January 2 by investing $200,000.
2. McCumber Enterprises borrowed $100,000 from the Friendly Bank on January 2 by signing a one-year note payable (ignore the interest for now).
3. The company purchased a vehicle on January 2 for $14,000 cash. Gertie estimates that the vehicle will fill the company's needs for four years, after which she estimates she can sell it for $2,000.
4. The company paid cash for $75,000 of merchandise inventory on January 8.
5. On January 15, the company sold merchandise that cost $42,000 for a total selling price of $78,000 and collected the cash the same day.
6. On January 22, the company sold merchandise that cost $15,000 for a total selling price of $32,000 on account (a credit sale). The terms of the sale were 30 days, meaning McCumber Enterprises can expect to receive payment by February 21.
7. Cash payments for operating expenses in January totalled $22,500.

8. Besides the bank loan, the only amounts owed by the company at the end of the month were:
   a. $2,000 to company employees for work performed in January. They will be paid on February 3.
   b. A $700 utility bill that was received on January 26 and will be paid on February 15.

This information is the reality of what happened in McCumber Enterprises during January 2004. The measurement of that reality will be different, depending on the basis of accounting used to recognize the transactions. Remember, both treatments we will show are based on exactly the same reality—they are simply different methods of measuring that reality.

CASH BASIS OF ECONOMIC MEASUREMENT

cash basis accounting A basis of accounting in which cash is the major criterion used in measuring revenue and expense for a given income statement period. Revenue is recognized when the associated cash is received, and expense is recognized when the associated cash is paid.

The first approach to measuring economic activity is **cash basis accounting**—the simpler of the two bases. Everyone understands what cash is and can readily grasp the measurement criterion of this method. Its greatest strength, however, lies in the fact that it keeps the user's eye on the ball. As its name implies, the cash basis has only one measurement criterion: CASH!

Under cash basis accounting, we recognize economic activity only when the associated cash is received or paid. Consequently, we recognize a revenue only when the company receives the associated cash as a result of the earnings process. But not all cash received by a firm is revenue. When cash is received from company owners, the inflow of assets is not due to ongoing operations but due to an owner's investment. When cash is received from lenders, the amount owed to an outside party increases. Again, the inflow of assets is not due to ongoing operations.

Similarly, we do not recognize all cash paid out as an expense in cash basis accounting. When a company pays a dividend to its owners, we recognize the expenditure not as a company expense, but as a distribution of profits or a return on the owners' original investment.

Cash Basis Revenue Recognition

The cash basis has two criteria for revenue recognition:

realization Actual receipt of cash or payment of cash. Once cash has been collected or a transaction is complete, it is considered to be realized.

1. Cash must be received, or *realized,* in the transaction. In accounting terminology, **realization** occurs.
2. The receipt of cash must relate to delivering or producing goods, rendering services, or other business activities.

If a transaction meets both these requirements, we recognize it as a revenue for cash basis accounting and report it on the income statement.

Cash Basis Expense Recognition

The cash basis has two criteria for expense recognition:

1. Cash must be paid in the transaction.
2. The disbursement, or payment, must relate to delivering or producing goods, rendering services, or conducting other business activities.

If a transaction meets both these requirements, we recognize it as an expense for cash basis accounting and report it on the income statement.

Cash Basis Accounting

As the previous two sections have illustrated, in order to complete the equation Revenue − Expenses = Net Income, we need to determine which of the cash receipts are revenues and which are additions to capital, and which are increases in the amounts owed to outside parties. Alternatively, not all cash outflows are expenses. Some may be reductions in the amounts owed to outside parties (paying off a debt), while others may be a distribution of the wealth of the business to the owners (dividends). Therefore in order to calculate the net income of McCumber Enterprises, we need to determine (recognize) which of the cash items are revenues and which are expenses. From our example of McCumber Enterprises, only the following activities meet the recognition criteria:

1. The company purchased a vehicle on January 2 for $14,000 cash. Gertie estimates that the vehicle will fill the company's needs for four years, after which she estimates she can sell it for $2,000. Under cash basis accounting, the $14,000 purchase is considered an expense in January.
2. The company paid cash for $75,000 of merchandise inventory on January 8. This is considered an expense in January.
3. On January 15, the company sold merchandise that cost $42,000 for a total selling price of $78,000 and collected cash the same day. The sale of $78,000 is considered revenue because the company received the cash. The cost of the merchandise *is not an expense at this point*, because it was already recorded as an expense when it was purchased on January 8 (item 2).
4. Cash payments for operating expenses in January totaled $22,500.

All the other activities that occurred during January were either contributions by the owner ($200,000), amounts owed to outside parties (borrowing $100,000 from the bank), or did not involve cash (the sale on account for $32,000). The money owed to employees and the utility bill *will only become expenses when they are paid* (as stated, in February).

We can record these activities according to whether they are revenues or expenses (see Exhibit 2-6).

Exhibit 2–6
Results of Cash Basis Accounting

Date	Revenue	(—)	Expenses	(=)	Net Income Loss
Jan. 2			$ 14,000		($14,000)
Jan. 8			$ 75,000		(89,000)
Jan. 15	$78,000				(11,000)
January			22,500		(33,500)
Totals	$78,000		$111,500		($33,500)

Consider the following items from Exhibit 2–6:

- *Revenue.* Because McCumber Enterprises received only $78,000 in cash from sales in the month of January, only that amount meets both cash basis revenue recognition criteria (cash received, and cash related to delivering goods or services).

- *Expenses.* The $111,500 is the total of the expenses for the month of January because it meets both of the expense recognition criteria (cash was paid, and cash related to delivering goods or service).

Therefore, when we calculate McCumber Enterprises' net income for the month of January, we find that the company experienced a loss of $33,500.

But let's not forget about the other two cash transactions. Gertie originally contributed $200,000 to the business, and the company borrowed an additional $100,000 from the bank. So the company started out with $300,000 cash in its bank account, and under the cash basis of accounting it lost $33,500, so the company's *net cash wealth* is $266,500 ($300,000 − $33,500). This would correspond to the cash balance in the company's bank account at the end of January. All the other events did not include a cash component, so therefore they have no effect on the company's net cash wealth. As we will see in Chapters 3 and 4, the net wealth (called owners' equity) of a business is reported on the *balance sheet* of the business. The balance sheet displays the total of everything a business owns (assets), minus what it owes (liabilities). In Chapter 5, we will cover the *income statement*, which is where the revenues and expenses of a business are recorded.

Discussion Questions

2–17. Assume for a moment that you are McCumber Enterprises' loan officer at the bank. How would you evaluate the revenue and expense presented in Exhibit 2–6 in terms of the primary qualitative characteristic of relevance, including predictive value and feedback value?

2–18. If your response to Discussion Question 2–17 led you to the conclusion that there is a problem in terms of predictive value and feedback value, what item or items do you believe caused the problem? How do you think the company could account for the item or items to better relate costs to the revenues they generate?

Strengths and Weaknesses of Cash Basis Accounting

Besides its relative simplicity, the greatest strength of the cash basis of accounting is its objectivity. Cash basis accounting presents the *reality of cash,* an important reality in conducting a business. Cash basis accounting requires less subjective judgment than the other measurement basis. The cash basis has a weakness that prevents it from being the perfect measurement basis, however. Management can easily manipulate revenues and expenses reported in a particular income statement period simply by speeding up or delaying the receipt of revenues or the payment of amounts owed on expenses. The greatest weakness of the cash basis is that it makes no attempt to recognize expenses in the same period as the revenues they helped generate, offering a poor measurement of the *reality of performance.* This problem makes the cash basis income statement difficult to use either for predicting future profitability or for assessing past performance in cases where the company does not always receive cash at the point of sale or pay for expenses when it receives the goods and services.

Discussion Question

2–19. Provide two examples of situations in which your chequebook balance did not provide relevant information.

Accrual Basis of Economic Measurement

accrual basis accounting A method of accounting in which revenues are recognized when they are earned, regardless of when the associated cash is collected. The expenses incurred in generating the revenue are recognized when the benefit is derived rather than when the associated cash is paid.

accrue As used in accounting, to come into being as a legally enforceable claim.

The second basis of economic measurement is **accrual basis accounting.** The accrual basis does not rely on the receipt or payment of cash to determine when revenues and expenses should be recognized. The key to understanding accrual basis accounting is to understand the word **accrue.** To accrue means

To come into being as a legally enforceable claim.

Essentially, in accrual basis accounting, sales, purchases, and all other business transactions are recognized whenever a legally enforceable claim to the associated cash is established. The main focus of accrual accounting is determining when a legally enforceable claim to cash has been established between the parties involved in the transaction.

Accrual Basis Revenue Recognition

Accrual accounting has two criteria for revenue recognition:

1. Revenue must be earned; that is, the earning process must be substantially complete.
2. There must be a legally enforceable claim to receive the asset traded for the revenue. When a legally enforceable claim exists, the cash or other asset becomes a realizable asset such as an account **receivable.** In the cash basis, the cash receipt had to be *realized.* In the accrual basis, it must only be *realizable.*

receivable Money due to an entity from an enforceable claim.

Both criteria must be met to recognize revenue.

Three possible relationships can exist between the timing of the cash movement and the recognition of the revenue.

1. *Cash is received **at the time** the revenue is earned.* When you pay cash for a pair of Gap jeans, the Gap recognizes revenue at the point of sale. Delivery of the jeans constitutes completion of the earning process and your payment of cash realizes receipt of cash. Both criteria are met because the revenue is earned and realized.
2. *Cash is received **after** the revenue has been earned.* When you go to Office Depot to buy supplies for your office and Office Depot allows you to pay next month on a 30-day charge, Office Depot will receive your cash after the revenue has been earned. Delivery of the supplies completes the earning process and your signing of the invoice gives the store an enforceable claim to your cash.
3. *Cash is received **before** the revenue has been earned.* If you subscribe to *Maclean's* magazine for one year, you pay the subscription at the beginning of the year. *Maclean's* realizes your cash but has not yet earned it. The earning process will not be complete until *Maclean's* delivers a whole year's worth of weekly issues to you.

Because revenue must be earned before it can be recognized, the timing of the cash receipt is irrelevant. When the earning process is substantially complete *and* an enforceable claim exists to receive the cash, then the revenue is recognized. In Examples 1 and 2, the revenue is recorded in the books and shown on the financial statements at the time the sale is made. The fact that in Example 2 the company did not receive cash at that time does not affect recognition of the revenue. In Example 3, the receipt of cash does not cause revenue to be recognized because, under accrual accounting, the revenue is not recognized until it is earned (when the publisher sends the magazines to the customer).

Identifying the point in time when a revenue is earned is not always a simple matter. Accountants try to answer three questions in determining when revenue has been earned and therefore should be recognized. To emphasize that these questions are in no way related to the three examples, we are using letters to list them.

a. *Has* ***title*** *(legal ownership) to whatever was sold been transferred to the customer?* If the answer to this question is yes, revenue should be recognized. This question can be applied more easily to the sale of tangible products than to the sale of services. Services must be substantially complete to recognize revenue.

b. *Has an exchange taken place?* Each party to the exchange gives the other party something of value—goods and services in exchange for cash or receivables. In other words, has the customer taken receipt of whatever he or she purchased? If the answer to this question is yes, the revenue will likely be recognized.

c. *Is the earnings process virtually complete?* This is the toughest of the three questions to answer and applies better to the sale of services than it does to the sale of tangible products. Suppose you have contracted with Bill Austin to remodel your kitchen. It is a two-week job, and at the end of the second week, Bill has completed everything but changing the lamp over the dinette area. He ordered the lamp two months ago, but the supplier back-ordered it. It should arrive within another week. Has Bill substantially completed the work? Probably yes. He can recognize the revenue because the job is "virtually" complete.

It is not necessary for all three questions to be answered "yes" for revenue to be recognized. In most cases, a positive answer to any one of them is persuasive evidence that revenue has been earned and should be recognized.

Discussion Questions

2–20. On Saturday morning, you finally decide which model of computer to buy. The salesperson has agreed to have all the software you need installed and have the machine delivered to you by Tuesday afternoon. Because you purchased your last computer at Image Technologies, the store has agreed to extend credit to you as an established customer. You have 30 days to pay for your new computer. As of Monday,

a. has title passed?

b. has an exchange taken place?

c. is the earnings process complete?

2–21. When should Image Technologies recognize revenue

a. under the cash basis?

b. under the accrual basis?

Accrual Basis Expense Recognition

Under accrual accounting, there is only one criterion for expense recognition: A firm recognizes an expense when it receives the benefit from the expense. Like revenue recognition, expense recognition under accrual accounting is unrelated to the movement of cash.

Again, there are three possible relationships between the timing of the cash movement and the recognition of an expense.

1. *Cash is paid **at the time** the expense is incurred.* If a company holds a Christmas party and pays for the food when the caterer delivers it, the company receives the benefit of the expense at the same time it transfers the cash to the vendor.
2. *Cash is paid **after** the expense has been incurred.* A public utility cannot immediately exchange electricity for cash and must bill its customers on a monthly basis. When a firm receives and pays an electric bill, it expends the cash after the receipt of the electric service.
3. *Cash is paid **before** the expense has been incurred.* All insurance contracts require cash in advance to issue the policy and keep it in force. The policy expires or the expense occurs for each day as time passes during the policy's time span.

Discussion Question

2–22. Why would insurance companies require policies to be paid in advance?

If the one criterion for expense recognition is receiving the benefit from the expense, how do we know when the expense benefits the firm? For the most part, the key to expense recognition under accrual accounting is revenue recognition. Remember that to be useful for predicting future profitability and cash flow, an income statement should measure revenues for a specific period of time and the expenses required to obtain those revenues. Thus, accrual accounting attempts to capture the relationship between revenues and expenses. This relationship is referred to as matching.

If we re-examine the McCumber Enterprises transactions for January under the accrual basis of accounting (recognizing revenues and expenses), we will find that the company's net income is different than the $33,500 loss that was recorded the using the cash basis of accounting. First, it is largely irrelevant whether or not cash was actually received or paid out.

As with cash basis accounting, the $200,000 that Gertie started the company with on January 2 is not a revenue because it does not meet the criteria of being a revenue. The company is neither richer nor poorer (no change in its net wealth) as a result of this transaction. This is the same for the $100,000 borrowed from the bank on January 2 (still ignoring interest). The company may have $100,000 more in its bank account, but it now owes the bank $100,000; therefore there is no change in net wealth. The first difference between cash and accrual accounting is the vehicle purchased on January 2 for $14,000—it is *not* an expense under accrual accounting. The vehicle is only recognized as an expense when it is actually used to generate revenue. At this point, all the company has done is exchange one asset (cash) for another asset (the vehicle). There has been no change in net wealth. What the vehicle might be worth at the end of four years ($2,000) is irrelevant.

The merchandise purchased on January 8 for $75,000 is *not* an expense under accrual accounting. Just as with the vehicle, all the company has done is exchange one asset for another. When the company actually *sells* the merchandise, *then* it will record the cost of the merchandise sold as an expense. This occurs on January 15, when the company sold merchandise that cost $42,000 for $78,000 cash. The $42,000 is considered an expense of the business (called Cost of Goods Sold). The $78,000 is revenue, and the $42,000 is an expense. On January 22 the company sold merchandise that cost $15,000 for $32,000 (credit sale). It did not receive cash for this sale, but did receive something else of value. That thing of value is the *customer's promise to pay* cash at some future date (called an account receivable). This is considered revenue just as if the company had received cash (and the $15,000 is an expense). The cash payments ($22,000) for expenses incurred in January are expenses just like under cash basis accounting. The thing to remember is that those expenses must have been incurred in January for them to be considered an expense in January. It actually does not matter whether they were *paid* in January (but in this case they were). The $2,000 still owed to the company's employees is an expense for the month of January (since that is when the employees did the work), and, likewise, the $700 utility bill is also an expense in January. The fact that these expenses will not be paid until February is irrelevant.

Just as with cash basis accounting, we can record these activities according to whether they are revenues or expenses (see Exhibit 2.7).

Exhibit 2–7
Results of Accrual Basis Accounting

Date	Revenue	(—)	Expenses	(=)	Net Income
Jan. 15	$78,000		$42,000		$36,000
Jan. 22	32,000		15,000		53,000
January			22,000		31,000
January			2,000		29,000
January			700		28,300
Totals	$110,000		$81,700		$28,300

Under accrual basis accounting, we can see that in January, McCumber Enterprises experienced a *profit* of $28,300. Under cash basis accounting the company recorded a *loss* of $33,500. Which is correct? Well, they both are correct because they are both recording the same events, but in different ways and at different times.

We can see that ultimately there is a considerable difference between cash basis and accrual basis accounting when we look at McCumber Enterprise's net wealth. Cash basis accounting never took into consideration the $100,000 the company owes the bank. Nor did it consider that the company owns a valuable asset (the vehicle worth $14,000). The company still has unsold merchandise that cost $18,000 and a customer that owes $32,000. Additionally, the company owes its employees $2,000, and has an unpaid utility bill for $700.

Therefore, in order to calculate McCumber Enterprises' net wealth, we need to take all these things into consideration. The company still has $266,500 in the bank (that doesn't change). Subtract from that the $100,000 owing to the bank, add the value of the vehicle ($14,000), add the remaining inventory ($18,000), add the money owed by the customer ($32,000), subtract the money owed to employees ($2,000) and subtract the utility bill ($700). This gives McCumber Enterprises a net wealth of $227,800.

At this point you should notice that under cash basis accounting, McCumber Enterprises *lost* $33,500 and ended up being worth *more* ($266,500) than under accrual basis accounting ($227,800). How is this possible? The answer lies in the timing of events and which ones get recognized. Eventually, the company will pay the money it owes and receive the money that is owed to it. Additionally, the company will eventually use up the vehicle (which was listed as an expense under cash basis accounting but not under accrual basis accounting) and sell all the remaining merchandise. When the company finally comes to the end of its business life and everything is liquidated (turned into cash), the company's change in wealth will be the same no matter which basis of accounting was used.

The important thing to remember is not which accounting system is "right," but which one provides the most useful and broadest method of measuring economic performance. Cash is a very narrow measure of economic performance because it only deals with one thing: cash. Accrual basis accounting expands how we view the performance of a business by recognizing all events leading to a legally enforceable claim to cash, no matter when cash is actually received or paid. Accrual accounting is much more useful to the decision maker because it includes more relevant information.

And finally, under GAAP, accrual basis accounting is the only acceptable basis for reporting economic performance to external parties. That is, all financial statements must be prepared using accrual accounting methods. Cash basis accounting may be used for internal reporting purposes, but not for external reporting.

Discussion Question

2–23. Checker Business Systems sells computer equipment to small businesses. During 2004, the sales activity was as follows:

February: Sold $6,000 worth of equipment on account. The customers paid in full on March 15.

March: Sold $4,500 worth of equipment on account. Customers paid in full on April 15.

Describe the impact of different periodic measurements by determining how much should be included in each period if the business activity is measured

a. each month,

b. each quarter,

c. each year.

Decision Makers and Understandability

Now that you know the qualities required to make accounting information useful, you can appreciate the fact that, as a decision maker and user of accounting information, you must evaluate the qualities of available information to assess its usefulness. You must also recognize that the information you receive from accountants constitutes only a part of the information you need to make sound economic decisions. It is an important part, to be sure, but only a part. The reports generated from accounting information can be thought of as the tools of the accounting trade. As

financial tools are introduced and discussed throughout the rest of this text, keep in mind that each has its limitations and imperfections. After working with the material provided here, however, you should be able to use each financial tool to its fullest potential.

SUMMARY

The aim of all decisions is to obtain some type of reward, either extrinsic or intrinsic, at a cost. Good decisions are made when a reasonable balance is found between the sacrifice and the reward in the context of uncertainty.

Economic decisions are those involving business transactions. Internal decision makers are individuals within a company who have access to most of the company's financial information and who make decisions on behalf of the organization. External decision makers are individuals or organizations outside a company who have access to the limited information provided to them by the company and who make decisions about the organization. Management accounting information is prepared for use by internal parties, and financial accounting information is prepared for use by external parties (but is also used by internal parties).

Both internal and external parties attempt to predict the future and timing of cash flows. Essentially, they are all trying to determine whether they will be paid, when they will be paid, and how much they will be paid. Cash flow becomes an important criterion to evaluate business success or failure, with other accounting measures of performance.

Accounting information is a key ingredient of good decision making. Business activity produces data. These data are of no value to decision makers until they are put into a useful form and become information. Accounting information must possess certain qualitative characteristics: (1) relevance, including timeliness and either predictive value or feedback value; and (2) reliability, including verifiability, representational faithfulness, and neutrality. Useful accounting information should also possess comparability and consistency, and be understandable to economic decision makers.

A firm performs four functions: It operates to produce revenues, invests in productive resources, finances those investments, and makes decisions. Such activities constitute the reality of business transactions and events. Accountants attempt to measure that reality in the accounting records and reports. The measurement of reality may not precisely reflect reality because of the basis selected to recognize revenues and expenses in a particular time period. This chapter presents two distinct bases: the cash basis and the accrual basis.

The cash basis of accounting recognizes revenues and expenses when realized—when the cash associated with revenue is received, and when the cash associated with an expense is paid. Periodic net income (or loss) under the cash basis is simply the difference between cash revenues received and cash expenses paid.

The accrual basis of accounting provides a broader measure of economic performance because it includes factors that a decision maker would be interested in knowing about. These factors include the future cash flows of a business (both inflows and outflows) as well as the obligations of the business and the business's other non-cash assets (vehicles, inventory, money owed to the business by customers). Because this provides a more useful measure of economic performance, future chapters will focus on the collection, summation, reporting, and presentation of accounting information under the accrual basis of accounting.

KEY TERMS

accounting information, p. 38
accrual basis accounting, p. 48
accrue, p. 48
cash basis accounting, p. 45
cash flow, p. 36
cost/benefit analysis, p. 34
expense, p. 43
external decision makers, p. 35
feedback value, p. 40
financial accounting, p. 36
information, p. 38
internal decision makers, p. 35
management accounting, p. 36
materiality, p. 39
net cash flow, p. 36
neutrality, p. 41
opportunity cost, p. 34
periodicity, p. 42
predictive value, p. 40
realization, p. 45
receivable, p. 48
recognition, p. 43
relevance, p. 40
reliability, p. 40
representational faithfullness, p. 40
revenue, p. 43
timeliness, p. 40
verifiability, p. 40

REVIEW THE FACTS

1. Provide two examples of rewards and sacrifices that may be involved when a decision is being made.
2. What is an opportunity cost?
3. Define *cost/benefit analysis.*
4. What is economic decision making?
5. Name the two broad categories of economic decision makers, and explain the differences between them.
6. What are the two major branches of accounting and how do they differ?
7. List the three major questions asked by economic decision makers.
8. What is accounting information?
9. Explain the difference between data and information.
10. Name the two primary qualitative characteristics of useful accounting information.
11. What characteristics are necessary for accounting information to be relevant?
12. List the characteristics necessary for accounting information to be reliable.
13. Explain the difference between the primary and secondary qualities of useful accounting information.
14. What are the secondary qualities of useful accounting information?
15. Explain the responsibility of both the accounting profession and the user for the understandability of accounting information.
16. Explain the difference between reality and the measurement of reality, and provide an example of each.
17. How does periodic measurement create complications?
18. In accounting, what does it mean for an item to be "recognized"?
19. In accounting, what does it mean for an item to be "realized"?
20. Under the cash basis of measurement, when does revenue recognition occur?
21. Under the cash basis, when are expenses recognized?
22. What is the greatest strength of the cash basis?
23. What is the greatest weakness of the cash basis?
24. Under the accrual basis of measurement, when does revenue recognition occur?
25. Explain the difference between the reality of cash and the reality of performance.

Apply What You Have Learned

LO 2 & 3: Economic Decision Making

1. Tommy Hoag is a commercial artist who paints various types of signs for other businesses. He received a $15,000 order from Bill Bates Inc. for 1,500 signs to be displayed in Bates' retail outlets. This is a very large job for Tommy's new business. He has concerns because he estimates it will take him a month working full time to complete the signs and Bates proposes to pay him the full contract amount 30 days after he delivers the signs. These are Bates' standard payment terms. Tommy did a small job for Bates last year ($1,500) and received payment 50 days after completing the work.

   Tommy estimates the materials (sign board, paint, brushes, etc.) will cost $9,500, which he can buy on 30-day terms from Long's Art Supply Company (Tommy can pay for the materials 30 days after he buys them).

   Having taken the accounting course in which you are now enrolled, Tommy remembers that any economic decision entails attempting to answer the following three questions:

   - Will I be paid?
   - When will I be paid?
   - How much will I be paid?

REQUIRED:

a. If Tommy can satisfy himself as to the first question (Will I be paid?), what are the answers to the other two questions? Remember the last question (How much?) has two parts.

b. The problem states that Tommy has concerns. What do you think is troubling him about the order from Bill Bates Inc.?

c. Based on your answer to the previous requirement, identify three things Tommy could do to solve his dilemma.

LO 2 & 3: Economic Decision Making

2. Jon Smythe is a trained automobile engine mechanic. He has received a $25,000 contract from David Watts Limited to repair 25 automobile engines for Watts' taxicabs. Jon has concerns about the terms of the contract. He estimates it will take him a month working full time to complete the engines and Watts will pay him 30 days after he completes the engines. These are Watts' standard payment terms, and in the past Watts has paid Jon on average after 40 days.

   Jon estimates the parts will cost $13,000, which he can buy on a 30-day charge from Sam's Auto Supply Company (meaning Jon can pay 30 days after the purchase). Jon has the normal questions of any economic decision:

   - Will I be paid?
   - When will I be paid?
   - How much will I be paid?

REQUIRED:

a. Jon believes that Watts will pay him based on their prior dealings. What are the answers to the other two questions? Remember the last question (How much?) has two parts.

b. The problem states that Jon is concerned about the contract terms. Why do you think he is concerned?

c. Based on your answer to the previous requirement, identify three things Jon could do to lessen his concerns.

LO 2 & 3: Economic Decision Making

3. Rob Schwinn is a manufacturer of quality furniture specializing in high-quality wooden tables and chairs. He received a $50,000 contract from Dillon Corporation to build 100 upholstered sofas, to be sold in Dillon's stores. Rob believes he needs two months to complete the sofas. He must purchase an industrial sewing machine for the fabric work on the sofas at a cost of $10,000 for the machine and training, which will equal the profit that he will make on this contract. Dillon has agreed to pay Rob Schwinn 30 days after delivery of the sofas.

   Rob knows that he can buy the sewing machine on a 90-day plan from Dan's Sewing Machine Company. Rob knows that any economic decision entails attempting to answer the following three questions:

   - Will I be paid?
   - When will I be paid?
   - How much will I be paid?

REQUIRED:

a. Assuming Rob can satisfy himself as to the first question (Will I be paid?), what are the answers to the other two questions? Remember the last question (How much?) has two parts.

b. List the pros and cons of Rob's accepting this contract.

LO 4: Cash Concepts

4. Interpret the following statement: "Cash is the 'ball' of business."

LO 5 & 6: Qualitative Characteristics of Accounting Information

5. Presented below are the qualitative characteristics of useful accounting information as discussed in the chapter, followed by definitions of those items in scrambled order.

a. Relevance	**f.** Verifiability
b. Timeliness	**g.** Representational faithfulness
c. Predictive value	**h.** Neutrality
d. Feedback value	**i.** Comparability
e. Reliability	**j.** Consistency

1. _____ The same measurement application methods are used over time.

2. _____ The accounting information is free of bias.

3. _____ The information provides input to evaluate a previously made decision.

4. _____ The information allows the evaluation of one alternative against another alternative.
5. _____ In assessing the information, qualified persons working independently would arrive at similar conclusions.
6. _____ The information helps reduce the uncertainty of the future.
7. _____ The information has a bearing on a particular decision situation.
8. _____ The information is available soon enough to be of value.
9. _____ The information can be dependable.
10. _____ There must be agreement between what the information says and what really happened.

REQUIRED:
Match the letter next to each item with the appropriate definition. Each letter will be used only once.

LO 2, 3, 4, 5, & 6: Chapter Concepts

6. Presented below are items relating to the concepts discussed in this chapter, followed by the definitions of those items in scrambled order:

a. Cash flow
b. Comparability
c. Data
d. Financial accounting
e. Information
f. Management accounting
g. Net cash flow
h. Economic decision making

1. _____ The raw results of transactions and events
2. _____ A branch of accounting developed to meet the information needs of internal decision makers
3. _____ Data transformed so they are useful in the decision-making process
4. _____ The movement of cash in and out of a company
5. _____ Any decision involving money
6. _____ Reports generated for one entity may be compared with reports generated for other entities
7. _____ The difference between the cash coming into a company and the cash going out of a company
8. _____ A branch of accounting developed to meet the information needs of external decision makers

REQUIRED:
Match the letter next to each item with the appropriate definition. Each letter will be used only once.

LO 2 & 6: Qualitative Characteristics of Accounting Information

7. Emma Peel is the chief accountant of Venture Enterprises. She is trying to decide whether to extend credit to Freed Company, a new customer. Venture does most of its business on credit, but is very strict in granting credit terms. Frank Freed, the owner and president of Freed Company, has sent the following items for Emma to examine as she performs her evaluation.

1. All company bank statements for the past seven years (a total of 84 bank statements)
2. A detailed analysis showing the amount of sales the company expects to have in the coming year and its estimated profit

3. Another, less-detailed analysis outlining projected company growth over the next 20 years
4. A biographical sketch of each of the company's officers and a description of the function each performs in the company
5. Ten letters of reference from close friends and relatives of the company's officers
6. A report of the company's credit history prepared by company employees on Freed Company letterhead
7. A letter signed by all company officers expressing their willingness to personally guarantee the credit Venture extends to Freed. (You may assume this is a legally binding document.)

REQUIRED:

a. As she evaluates Freed Company's application for credit, is Emma Peel an internal decision maker or an external decision maker? Explain your reasoning.

b. Analyze each item Freed sent in light of the primary qualitative characteristics of relevance (including timeliness, predictive value, and feedback value) and reliability (including verifiability, representational faithfulness, and neutrality). Explain how each item either possesses or does not possess these characteristics.

LO 6: Qualitative Characteristics of Accounting Information

8. You are in the market for a used car. You notice a promising advertisement in the local newspaper and make an appointment to meet with the seller, whose name is Chet. During your meeting you obtain the following information:

1. The car is a 1999 model.
2. Chet said he has used the car only for commuting to and from work.
3. You notice the car has out-of-province licence tags.
4. The odometer reading is 105,118 km.
5. Chet reports that he has had the oil changed every 5,000 km since he bought the car new.
6. Chet says this is the greatest car he has ever owned.
7. The glove box contains a maintenance record prepared by a licensed mechanic.

REQUIRED:

a. Evaluate each item from the list above in terms of its relevance (specifically, predictive value and timeliness) to your decision about whether to buy Chet's car.

b. Evaluate each item from the list above in terms of its reliability (verifiability, representational faithfulness, and neutrality) for deciding whether to buy Chet's car.

LO 6: Qualitative Characteristics of Accounting Information

9. The chapter states that to be useful, accounting information must possess the primary qualitative characteristics of relevance (timeliness and predictive value or feedback value) and reliability (verifiability, representational faithfulness, and neutrality). These characteristics are also applicable to other types of information.

Suppose that prior to taking your midterm exam in this course, your instructor gives you two options:

Option 1: One week before the midterm exam you will be given a rough idea of what is going to be on the exam.

or

Option 2: On the day following the exam, you will be given a copy of the actual midterm exam with an answer key.

Assume further that you have two goals:

Goal 1: To prepare for the midterm exam.
Goal 2: To evaluate your performance on the midterm exam.

REQUIRED:
Within the context of each of your two goals, evaluate both options using the primary qualitative characteristics. Be sure to explain how the primary characteristics are present or absent, and how such presence or absence affects you as a rational decision maker.

LO 6: Qualitative Characteristics of Accounting Information

10. Suppose you are about to buy a new car. The car you want is a Nissan Maxima. You have $30,000 in the bank, ready to spend on the new car. You obtain the following items of information:

1. On your first visit to Quality Nissan, a salesperson casually tells you that the price of a new Nissan Maxima is $25,500.
2. A friend tells you he heard that someone was selling a three-year-old Maxima for $18,000.
3. Another friend just bought a new Chevy pickup truck for $22,000.
4. The sticker price of a Maxima with the options you want is $26,800.
5. A Nissan dealer in the area is advertising a new Maxima with the options you want for $26,200.
6. A friend tells you she heard that someone bought a new Maxima a couple of months ago for around $24,000.

Assume that you are about to visit a Nissan dealership and your goal is to buy a new Maxima for the best price. You intend to use the previous information to evaluate whether or not the price you get is a good deal.

REQUIRED:

a. Evaluate each item from the list above in terms of its relevance (feedback value, predictive value, and timeliness). Explain how the presence or absence of the characteristics affects your ability to use the information to determine if you are getting a good deal.

b. Evaluate each item from the list above in terms of its reliability (verifiability, representational faithfulness, and neutrality). Explain how the presence or absence of these characteristics affects your ability to use the information to determine if you are getting a good deal.

LO 6: Qualitative Characteristics of Accounting Information

11. Exactly two weeks from today you must take the midterm exam for this class. You feel you are in trouble because you cannot seem to grasp exactly how you should prepare for the exam. As you are walking across campus, you see the following notice pinned to a bulletin board:

I CAN HELP!!!

I GUARANTEE AN "A" OR "B"

WILL TUTOR FOR $15 PER HOUR

Qualifications:

1. Got an "A" in the course myself.
2. Have outlines of all chapters of the text.
3. Have over 120 satisfied customers from previous semesters.
4. Know the Professor personally.
5. Know the authors of the text personally.
6. Working on a graduate degree in History.

CALL BILL AUSTIN AT 555-5555

REQUIRED:
Evaluate each of Bill's claimed qualifications in relation to the primary characteristics of:

a. Relevance (including timeliness and predictive value or feedback value).
b. Reliability (including verifiability, representational faithfulness, and neutrality).

LO 7 & 8: Cash Basis Measurement

12. Katie Bales Enterprises began operation on January 2, 2004. During its first month of operation, the company had the following transactions:
    - Purchased $35,000 worth of merchandise inventory on January 2. The amount due is payable on February 2.
    - Paid January office rent of $3,000 on January 3.
    - Purchased $10,000 worth of merchandise inventory on January 5. Paid cash at the time of purchase.
    - Sold inventory that cost $18,000 for $30,000 to a customer on January 10 and received the cash on that date.
    - Sold inventory that cost $5,000 for $9,000 to a customer on January 20. The sale was on account and the customer has until February 20 to pay.
    - Paid cash expenses of $7,500 during January.
    - Received bills for utilities, advertising, and phone service totalling $1,500. All these bills were for services received in January. They will all be paid the first week in February.

REQUIRED:

a. Calculate the revenues, expenses, and net income or loss for Katie Bales Enterprises for the month of January 2004 using the cash basis of accounting.
b. Do you think that the net income figure calculated in the previous requirement provides a good measure of the reality of the company's economic performance during the month of January? Explain your reasoning.

LO 9: Accrual Basis Measurement

13. Katie Bales Enterprises began operation on January 2, 2004. During its first month of operation, the company had the same seven transactions as noted in problem 12.

REQUIRED:

a. Calculate the revenues, expenses, and net income or loss for Katie Bales Enterprises for the month of January 2004 using the accrual basis of accounting.

b. Do you think that the net income figure calculated in the previous requirement provides a good measure of the reality of the company's economic performance during the month of January? Explain your reasoning.

LO 7 & 8: Cash Basis Measurement

14. Snow and Ice Enterprises began operation on June 1, 2004. During its first month of operation, the company had the following transactions:
    - Purchased $40,000 worth of merchandise inventory on June 1. The amount due is payable on August 1.
    - Paid June office rent of $2,000 on June 3.
    - Purchased $20,000 worth of merchandise inventory on June 4. Paid cash at the time of purchase.
    - Sold inventory that cost $30,000 for $42,000 to a customer on June 10 and received the cash on that date.
    - Sold inventory that cost $10,000 for $14,000 to a customer on June 20. The sale was on account and the customer has until July 20 to pay.
    - Paid cash expenses of $9,500 during June.
    - Received bills for utilities, advertising, and phone service totalling $3,500. All these bills were for services received in June. They will all be paid the first week in July.

REQUIRED:

a. Calculate the revenues, expenses, and net income or loss for Snow and Ice Enterprises for the month of June 2004 using the cash basis of accounting.

b. Do you think that the net income figure calculated in the previous requirement provides a good measure of the reality of the company's economic performance during the month of June? Explain your reasoning.

LO 9: Accrual Basis Measurement

15. Snow and Ice Enterprises began operation on June 1, 2004. During its first month of operation, the company had the same seven transactions as noted in problem 14.

REQUIRED:

a. Calculate the revenues, expenses, and net income or loss for Snow and Ice Enterprises for the month of June 2004 using the accrual basis of accounting.

b. Do you think that the net income figure calculated in the previous requirement provides a good measure of the reality of the company's economic performance during the month of June? Explain your reasoning.

LO 8 & 9: Cash versus Accrual

16. Roger Webb Enterprises began operation on January 2, 2004. During its first month of operation, the company had the following transactions:
    - Paid January office rent of $2,000 on January 2.
    - Purchased $25,000 worth of merchandise inventory on January 5. The amount due is payable on February 5.
    - Purchased $15,000 worth of merchandise inventory on January 8. Paid cash at the time of purchase.
    - Sold merchandise that cost $12,000 for $18,000 to a customer on January 16 and received the cash on that date.
    - Sold merchandise that cost $9,000 for $13,500 to a customer on January 26. The sale was on account and the customer has until February 26 to pay.
    - Paid February office rent of $2,000 on January 31.

REQUIRED:

a. Calculate the revenues, expenses, and net income or loss for Roger Webb Enterprises for the month of January 2004 using the cash basis of accounting.

b. Calculate the revenues, expenses, and net income or loss for Roger Webb Enterprises for the month of January 2004 using the accrual basis of accounting.

c. Explain in your own words what caused the differences between the net income reported under the cash basis of accounting and the one reported under the accrual basis.

d. Which of the two accounting approaches do you think:
- **(1)** provides better information as to cash flow for the month of January?
- **(2)** provides better information as to what Roger Webb Enterprises earned during the month of January?
- **(3)** better reflects the company's ability to generate future earnings and cash flow?

FINANCIAL REPORTING CASE

17. Look at Sobeys Inc.'s annual report to answer the following questions.

    a. List the divisions of Sobeys and the primary market of each division.

    b. What factors should Sobeys consider before adding a new division?

    c. For what reasons would Sobeys sell or close a division? What factors should management consider to make such a decision?

ANNUAL REPORT PROJECT

You now have your annual report and have prepared an index of its contents. Your annual report project eventually will contain the following sections.

I. General Information
II. SWOT Analysis
III. Capital Structure
IV. Assets
V. Cash Flows

VI. Financial Ratio Analysis
VII. Internet and Library Research
VIII. Summary and Conclusions

17. Section I contains the following subsections.

A. Record the Internet address of your company.
B. Identify the company's industry.
C. Identify the Standard Industrial Classification (SIC) code of your company. You can find SIC codes in several ways:
  1. Sometimes the annual report contains the SIC. Look in general information often at the end of the annual report.
  2. Try the Internet address of the firm. Look on the web site, or e-mail the company for the information.
  3. If all these fail, go to the library and consult a reference librarian to find a reference publication that will give you this information.
D. Identify the stock exchange(s) where your company's shares trade.
E. Record the ticker symbol of the company.
F. Find the auditor's report and record the name of the auditing firm.
G. Read the president's (or CEO's) message and prepare a brief summary of this message.
H. Read any other promotional or informational material about the company. This information usually relates the firm's views on social responsibility, marketing strategy, direction for the future, environmental issues, and so on. Write a brief summary of this information provided in the annual report.

REQUIRED:
Complete section I of your project. Turn in one copy to your instructor and retain a clean copy for your final project folder. For group projects, divide the parts equitably among the group members.

MICRO AND MACRO ECONOMICS

Economics is studied under two heads_

1) **Micro economics analysis**
2) **Macro economics analysis**

Micro economics was the basis of study in ancient times because they had never thought of approaching the macro aspect with the changing conditions, the economic problems took a new turn resulting in the change in approach of economic analysis. Thus more importance was now given to Microanalysis than Macro analysis. Now a days both macro and microanalysis are quite popular. But the credit of using these words goes to Professor RAGNAR FRISCH of Oslo University. Both of these terms are explained in detail below.

MICRO ECONOMICS

Classic economists have established and developed micro economics. The word ôMicroô has been derived from a Greek word ôMikrosô. It means micro or small. As the name suggests Micro Economics studies theories related with individual produces, individual firms and individual industries. Classical economists have been important decision or Micro Economics. Adam smith himself has accepted the fact that an individual works only by inducing the feeling of selfishness. This is an example of his recognition of micro economics .Even the neo classical economist Marshal has made an individual material welfare as the basis of subject matter of economics. In fact classical economists had studied macro economics and not separately.

The fundamental tendencies of Micro Economics can be classified by following definitions.

1) Professor Boulding _:
   Micro Economics is the study of particular economic organisms and their interaction and of particular economic quantities and their determination.

2) Henderson and Quandt_:
   Micro Economics is the study of economics actions of individuals and well-defined group of individuals.

   The definitions of the above economists clearly indicate that in Micro Economics is a study of behavior of some particular economic units .For example _with the rise in price of a commodity , the economics decreases its consumption but the producer increases its production. The study of these types of private or personal events are possible only in Micro Economics we also study an industry with

innumerable firms in Micro Economics. This is because a single unit is represented by an industry for the whole economy. Countless economics work in a nations economy. In this condition it is essential to study industries under Micro Economics.

CHARACTERISTICS OF MICRO ECONOMICS

Following are the characteristics of economics:

1) Study of individual units.

Micro economics helps in the analysis of individual incomes, individual production with group or macro events. Thus micro economics helps in the analysis of whole economy along with study of personal problems.

2) Study of small variable:
   Small variables form part of study of Micro Economics. The effect of these variables is so insignificant that the changes in them do not affect the economy. For example: the demand and supply of the whole economy can never ed by one consumers consumption and one produces production.

3) Study of disseminations of individual price:
   Micro Economics is also known as ôPrice Theoryô. Thus, individual prices of various commodities are influenced by demand and supply are determined under it we also study the events of demand and supply of the commodity in this reference.

USE AND NEED OF MICRO ECONOMICS

Micro Economics has been used since ancient times. Although at present Macro Economics is being used largely yet the uses of Micro Economics is as follows:

1) Essential for whole economy:
   Markets demand and supply is the aggregate of individual demand and supply, thus for knowing the details for the whole economy we must have knowledge of individual unit. If we want information regarding the position of jute industries in the national economy, we must know about various firms with in the jute industry. Thus Micro Economics helps to understand Macro Economics.

2) Helpful for whole economy:
   Price determination and distribution are some important problems in an Economy. Each factors of production demands a greater share for itself. Like wise the problem of price determination also exists Micro Economics has been quite competent in providing a solution for these problems. Since ancient time Micro Economics has been used for price determination in Micro Economics the modes of price and demand are utilized. Thus model presents with the fact that price is determined through the relative forces of demand and supply. The equilibrium

position exits where the demand and supply are in balance. Thus Micro Economics enlightens us on equilibrium as well as.

3) Helpful in formulating economic polices:
   Micro Economics plays an important role in the determination of economic polices. Under this government polices are studied with a view on how they affect working of individual or particular units. For example: we can analyze the effect of government policies on the prices of particular commodities and labour cost and the effect of government policies on distribution of resources.

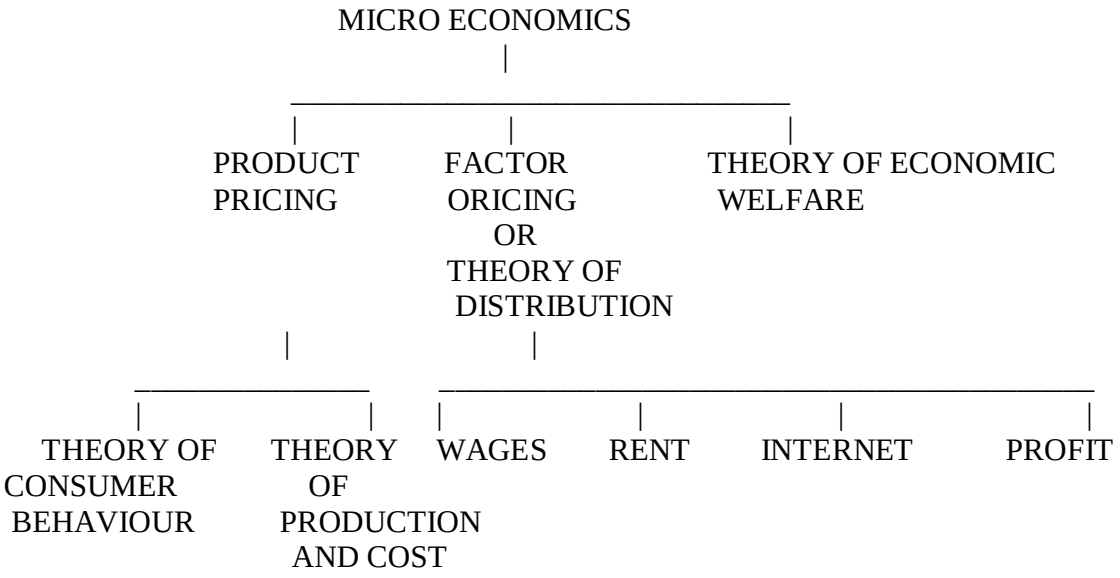
4) Investigation of condition of economic welfare:
   In Micro Economics along with the attainment of information about individual consumption, living standard etc we can also analyse a effects of public expenditure and public income. If the society benefits more with public expenditure has compare to taxation, than it could definitely be concluded that the economic welfare of society would increase. On the other hand if economic welfare declines than it is because of fall in living standard and consumer surplus due to the influence of public expenditure an income. Thus economists in ancient times considered Micro Economics as a scale of economic welfare.

5) Useful in decision making for individual units:

Microeconomics help in taking the right decision regarding the problems of individual units (like firm, family, individual income, individual savings, etc). For example: every consumer tries to attain maximum satisfaction through limited resources. Like wise producers also try to get maximum satisfaction with maximum production cost. Today each and every firm tries to secure maximum profit by utilizing the demand for analysis and linear programming.

BRANCHES OF MICRO ECONOMICS

Micro Economics has the following branches_:



LIMITATIONS OF MICRO ECONOMICS

Micro economics is practiced since ancient era and has been accepted as a essential part of economics for the study of economic problems. But it has certain limitations. They are as follows: -

1) Presents one side of the coin (economy):-.

Micro economics concern the study of individual units and not the whole economy. Consequently this analysis in no way represents the true picture of countries and world economy. In other words micro economicsô approach is quite constricted rather than being broad.

2) Unread assumptions: -
   Micro economics is based on unread assumptions that is why it is also termed as imaginary. It is applicable only when an economy is operating under full employment where as full employment level never exists in any economy. Prof. Keynes has rightly commented saying that imagining full employment means ignoring our problems.

3) Imperfect for some economic problems: -

There are certain problems that cannot be dealt in micro economics, e.g. Monetary policy, public finance, industrial policy, exile policy, etc. that is why the importance and scope of macro economics has increase greatly.

4) Certain conclusions of micro economics analysis are not suited from the point of view of whole economy: -

Micro economics major decisions are based on the study of individual units or take up individual approach applicable for macro aspects as well, but practically these approaches do not hold good, e.g. It could be said that savings are good for an individual but not for the economy as a whole, because it adversely affects consumption, production and employment.

MACRO ECONOMICS

Macro Economics was practiced due to various defects and content changing form of Micro economics. Due to 1930ôs worldwide theory of full employment. Prof. Keynes came up with a new employment theory. He said that national and global problem should be approached from macro economistôs point of view. They also have accepted the importance of micro economics.

The nature of macro economics is completely different from micro economics. The problems of the whole economy are studied under macro economics like National income, total production, employment, total supply.

Definition of macro economics: -

It is essential to understand the following definition for understanding the concept of macro economics.

1) Prof. Boulding-ñMacro-Economics deals not with the individual quantities as such but with aggregate of these quantities not with individual incomes but with national income not with individual output but with national output. ò
2) Gardner Ackley-ñIt looks at the size and shape and functioning of the ñelephantò of economic experience, rather than working of articulation or dimension of individual parts. It studies the character of the forest, independently of the trees.ñ

As Marshall during the study of representative firm, imagined a tree in a jungle representing all the other trees of the jungle. Likewise Gardner and Ackley specifically indicated while imagining a jungle that there is the importance of jungle and not of one particular representative tree in Micro Economics. Thus Macro Economics is a study on a broader bias rather than concentrating on Micro elements.

CHARACTERICTS OF MACRO ECONOMICS

The analysis of the above definitions give the following characteristics of macro economics; -

1) Macro Approach: -

Macro Economics having a macro approach does not give importance micro variables. National and International problems are solved with its assistance. Macro Economics stresses on the importance of dynamic economy while Micro analysis on the static economy

2) ñIt looks at the total size and shape and functioning of the ñelephantò of economic experience rather than working of articulation or dimension of individual parts. It studies the character of the forest independently of trees which compose it.ò- Gardner Ackley

2) MACRO ANALYSIS- macro analysis is the basis of macroeconomics.
For example the subject matter of macro economic includes the effect of monetary and fiscal policy of the government and not its effect on one particular individual or industry. If the composite effect of public in come and expenditure has a positive effect on the society, then it would definitely favorably affect the persons living in the society.

3) GROUP WELFARE RATHER THAN INDIVIDUAL WELFARE- group
Welfare is the prime objective of macro economics making it more significant than individual welfare

4) INTERDEPENDENCE- Change in one unit does not affect the level of Equilibrium in the other in micro economics while in macro units are mutually related so much so that the change in equilibrium in one unit is followed by changes in other too.

NEED AND USE OF MACRO ECONOMICS

Now a days the importance of macro economics has greatly increased due to the limitations and difficulties of micro economics .The need and use of macro economics is made more significant by the following points ï

1) HELPS IN THE DETERMINATION OF PUBLIC ECONOMIC POLICY-At Present, the scope of macro economics encircles international trade, national income and employment, theory of economic development, general price level, money and finance etc. Macro approach is quite useful in framing economic policies aimed at removing unemployment, favoring foreign trade and putting a check on inflation. With the use of macro economics the government plans for economic development. Where in increase in national income, production and employment target for saving and investment are determined. Today under developed countries are mainly facing the problem of development, thus the solution of all these problems can easily be found in macro economics.

3) THE SCALE OF ECONOMIC DEVELOPMENT- While comparing the development of two countries the living standard of the two countries is

compared. But the true picture is still not represented. Thus macro economics comes handy in drawing the true and complete picture of the whole affair.

4) USEFUL IN STUDING MICRO ECONOMICS ï It has been generally believed that macro economics helps in the development of micro economic because for the practical application of its laws and theories, it requires approach. For example law of diminishing utility is formulated after studying the behavior of individual group.
5) USEFUL IN THE STUDY OF COMPLICATED ECONOMY ï The economic methods are proving to be too complicated and the interdependence of economic elements have also increased greatly today macro economics give us the real picture of the whole economic organization and working while micro economic gives insight only into an individual unit or firm.

LIMITATIONS OF MACRO ECONOMICS

The importance of macro economics analysis has been widely recognized and is increasing but there are certain limitations, they are as follows:

1.Impractical conclusions:

Sometimes, the policies formulated on the basis of macro units result in failure. For example to conclude that prices of commodities would be stable, if the general price index is stable would be a wrong assumption. This is because the increase in some and decrease in the price of other commodities would lead to general price level. Being stable the prices of individual commodities might keep on fluctuating.

2.Insignificant individual units:

The whole economy is significant under macro economicsô analysis and not individual units. As a result it ignores not only the existence but also importance of those units, which are the very foundation of the economic setup, which is unfair.

3.Ignores the importance of group structure:

Generally macro economics studies the external appearance of a group and does not look into the internal structure until and unless we do not have the exact information regarding the structure and all its parts any kind of forecast would be futile in this reference. Thus it is appropriate to say that to give suggestion or forecast on the basis of a group would not be right until we do not get the complete information about the structure and the mutual relationship and behavior of various parts of the group.

4.Collective units do not represent the individual units:

Here, it could be said that one single group could never influence the various economic fields equally. For example with the increase in total demand, total production would

increase and some other firms would decrease. Similarly decrease in consumption of commodities adversely effects their production and vice-versa. Thus due to a number of differences a group fails to present a true picture of the individual units.

INTERDEPENDENCE OF METHODS

Micro and macro economics are two different methods of economic analysis. both of them are not competitors but are complimentary. Neither of the two are complete in itself. Each has its own defects and limits. Shortcoming of one is fulfilled by the other. That is why both these systems are called complimentary to each other. This can also be proved by the following examples.

1.Need for the economic analysis in macro economics analysis:

The intimate relationship pf macro economics with micro economics can be explained as follows:

a} The combination of individual units for getting an insight into the whole economy and determine the related policies, is studied. The conclusion drawn on the basis of macro economics would not be correct till we do not have the exact knowledge of individual units. Thus it can be said that micro economics is the base on which macro economics is standing. For example- as any society is made of persons similarly an industry constitutes of various firms and an economy consists of various industry. Therefore it is necessary to have complete knowledge regarding individual units to understand the whole economy, as we must have the data of incomes of all the individuals to calculate the national income since the total of incomes of all individuals adds up to make national income.

b} we can have access to the right and exact information regarding the general tendency of an economy only if we have the knowledge of the facts and theories, which effect the behavior of individuals, families and firms. Thus the job of macro economics analysis remains incomplete without micro economic analysis, because the basis of studying whole economy is individuals analysis. According to Prof.Samuelson, ñ there is not really any opposition between micro and macro economics. Both are absolutely vital. And you are only half educated if you understand the one while being ignorant of the otherò.

c} Generally it is believed that with the increase in societies demand for commodities, the firms increase their production, but this is not so easy for the firms whose production cost has an increasing trend. Similarly with an increase in income the demand for certain commodities might fall. For example at a low level of income people demand for cycles. But with a rise in income their demand jumps to scooters. as a result the demand for scooters would definitely increase while the demand for cycles would be reduced. Consequently production in scooter factory would increase and in cycle factory it would fall. It is obvious from the above discussion that for attaining proper knowledge regarding working of an economy, it is essential to pay attention on the various individual units and their mutual relationship.

2.Need for macro economic analysis in micro economic analysis:

As it is necessary to take help from micro economics analysis for macro economic analysis, similarly it is essential to take help from macro economic analysis for micro economic analysis.

RELATIONSHIP BETWEEN MICRO AND MACRO ECONOMICS

1.Occasionally an individual producer faces the problem regarding determination of wages of factors of production matter of micro economics. But practically this does not happen, the producer alone cannot determine the wages of its factors of production. Thus this is a problem that micro economics cannot handle since the wages of the laborers of one firm depend on the wage level of the another local firm. The wages are not only influences by local firms but also by firms in different parts of the country and the popular general wage rate of the whole economy.

2.The scale of a firm not only depends on the price but also the purchasing power of the society. If the purchasing power of the society is less, the scales would not rise even with the fall in the prices and vice versa.

3. A firm would have to consider the total demand, purchasing power, level of employment and income level of the society for the determination of the quantum of production. in short , it can be said that no firm can determine the price wages, and output freely. Thus micro economic analysis needs the support of macro economic analysis for itôs functioning

   The above analysis clearly indicates that micro and macro economics are complimentary to each other. To conclude we cans ay that macro and micro economics must be used considering that though they are related closely, still they have certain fundamental differences, only there could be solved.

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LAW OF DEMAND

CONCEPT OF DEMAND

Demand for a commodity refers to the desire to buy a commodity backed with sufficient purchasing power and the willingness to spend.

For Example: You desire to have a Car, but you do not have enough money to buy it. Then, this desire will remain just a wishful thinking, it will not be called demand.

If inspite of having enough money, you do not want to spend it on Car, demand does not emerge.

The desire become demand only when you are ready to spend money to buy Car.

CONCEPT OF DEMAND

In Economics, demand refers to effective demand, which implies three things:

a) **Desire,**
b) **Means to purchase, and**
c) **On willingness to use those means for that purchase**

FEATURES OF DEMAND

1) **Desires and Demand:** Demand is the amount of commodity for which a consumer has willingness and ability to buy.

2) **Demand and Price:** Demand is always at a price. Unless price is stated, the commodity has no meaning. The consumer must know both the price and the commodity.

3) **Point of Time:** The amount demanded must refer to some period of time. Such as 10 kg of rice per week. The amount demanded and price must refer to a particular date.

4) **Utility:** Demand depend upon utility of the commodity. A consumer is rational and demands only those commodities which provide utility.

OBJECTIVES OF DEMAND ANALYSIS

1) **Demand Forecasting:** Forecasting of demand is the art of predicting demand for a product or a service at some future date on the basis of certain present and past behaviour patterns of some related events.

2) **Production Planning:** Demand analysis is prerequisite for the production planning of a business firm. Expansion of output of the firm should be based on the estimates of likely demand, otherwise there may be overproduction and consequent losses may have to be faced.

3) **Sales Forecasting:** Sales forecasting is based on the demand analysis.

4) **Control of Business:** For controlling the business, it is essential to have a well conceived budgeting of costs and profits that is based on the estimation of annual demand/sales and prices.

OBJECTIVES OF DEMAND

5) **Inventory Control**: A satisfactory control of business inventories requires satisfactory estimates of the future requirements which can be traced through demand analysis.

6) **Growth and Long Term Investment Programs**: Demand analysis is necessary for determining the growth rate of the firm and long-term investment planning.

7) **Economic Planning and Policy Making:** Demand analysis at macro level for the nation as a whole is of great help, the government can determine its imoprt and export policies in view of the long-term demand forecasting and estimation for various goods in the country,

Demand & Quantity Demanded

The term Demand refers to various quantities of commodity that the consumer is ready to buy at different possible prices of a commodity.

The term Quantity Demanded refers to a specific quantity to be purchased against a specific price of a commodity.

Example: A Consumers' Demand is 2 ice creams if the price per ice cream is Rs.15, and 4 ice cream if the price per ice cream is Rs.10.

Quantity Demanded is 4 ice creams if price happens to be Rs. 10 per ice cream.

Demand Schedule & Demand Curve

Demand Schedule is that schedule which expresses the relation between different quantities of the commodity demanded at different price.

According to Samuelson, "The table relating to price and quantity demanded is called the demand schedule.

Demand Curve is simply a graphic representation of demand schedule.

According to Leftwitch, "The Demand Curve represents the maximum quantities per unit of time that consumer will take at various prices.

Demand Schedule and Demand Curve are of two types

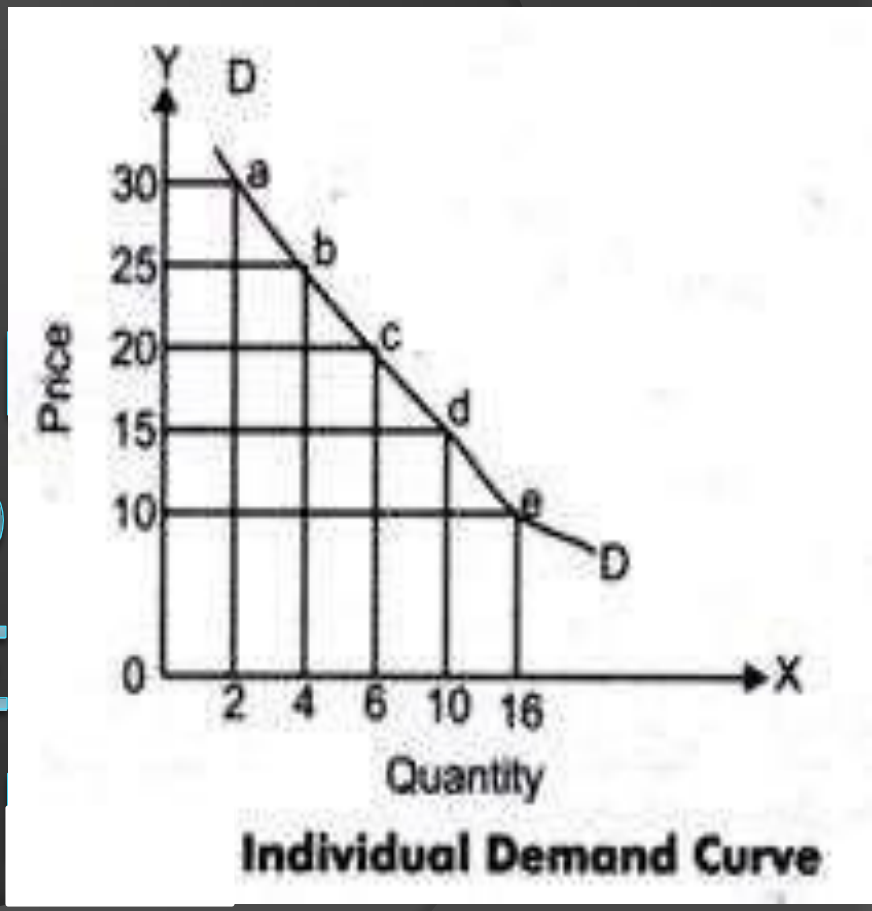
1) Individual Demand Schedule & Individual Demand Curve

2) Market Demand Schedule & Market Demand Curve

Refers to a tabular representation of quantity of products demanded by an individual at different prices and time.

Table-1: Individual Demand Schedule

Price of A (per kg in ₹)	Quantity Demanded (per week in kgs)
10	15
15	10
20	8
25	4
30	2



Individual Demand Curve

DEMAND CURVE

DEMAND FUNCTION OR DETERMINANTS OF DEMAND

Demand Function shows the relationship between demand for a commodity and its various determinants.

It shows how demand for a commodity is related to, say price of the commodity or income of the consumer or other determinants.

There are two types of Demand Function:

a) Individual Demand Function

b) Market Demand Function

DEMAND FUNCTION

Individual Demand Function

Individual Demand function shows how demand for a commodity, by an individual consumer in the market, is related to its various determinants. It is Expressed as:

$\mathbf{D_x = f (P_x, P_r, Y, T, E)}$

Here, $\mathbf{D_x}$: Quantity Demanded of commodity X

$\mathbf{P_x}$ **:** Price of the Commodity X

Y : Consumer's Income

T : Consumer's Taste & Preferences

E: Consumer's Expectations

N : Population Size

$\mathbf{Y_d}$ **:** Distribution of Income

DETERMINANTS OF DEMAND / FACTORS AFFECTING DEMAND

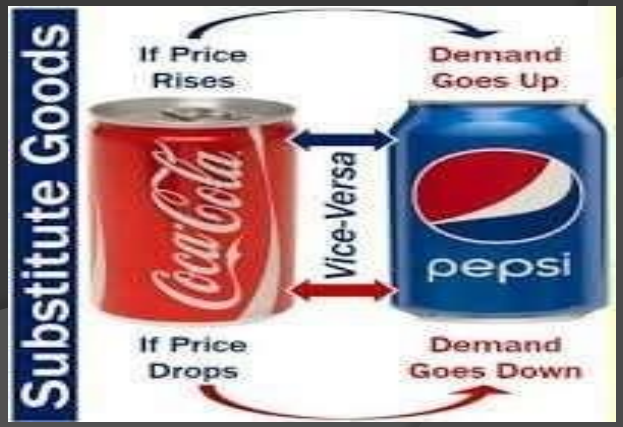
1) **Price of the Commodity:** The law of demand states that other things being constant the demand of the commodity is inversly related to its price. It implies that rise in price of commodity brings about a fall in its purchase and vice versa.

DETERMINANTS OF DEMAND / FACTORS AFFECTING DEMAND

2) **Price of Related Goods:** Demand for a commodity is also influenced by change in price of related goods. These are of two types:

a)Substitute Goods: These are he goods which can be substituted for each other, such as tea and coffee, or ball pen and ink pen.

In case of such goods, increase in the price of one causes increase in the demand for the other and decrease in the price of one causes decrease in the demand for the other.



DETERMINANTS OF DEMAND / FACTORS AFFECTING DEMAND

b) Complementary Goods: Complementary goods are those which complete the demand for each other, and therefore, demanded together.

For Example Pen and ink, Car and Petrol.

In case of complementary goods, a fall in the price of one causes increases in the demand for the other and rise in the price of one causes decrease in the demand for others.

DETERMINANTS OF DEMAND / FACTORS AFFECTING DEMAND

3) **Income of the Consumer:** The ability to buy a commodity depends upon the income of the consumer. When the income of the consumer increases, they buy more and when the income falls they buy less.

4) **Expectations:** If the consumer expects that price in future will rise, he will buy more quantity in present, at the existing price.

   likewise, if he hopes that price in future will fall, he will buy less quantity in present, or may even postpone his demand.

DETERMINANTS OF DEMAND / FACTORS AFFECTING DEMAND

5) **Taste and Preferences:** Taste and preferences include fashion, custom etc. Taste and preferences can be influenced by advertisement, change in fashion, climate, new inventions, etc.

Other thing being equal, demand for those goods increases for which consumer develop tastes and preferences.

Contrary to it, if a consumer has no taste or preference for a product, its demand will decrease.

Bell bottom To Pencil cut

Determinants of Demand / Factors affecting Demand

6) **Population Size:** Demand increases with the increase in population and decreases with decrease in population.

   Composition of population (male, female ratio) also affects the demand. E.g. Female population increases, demand for goods meant for women will go up.

7) **Distribution of Income:** if income is equally distributed, there will be more demand. If income is not equally distributed, there will be less demand.

   In case of unequal distribution, most will not have enough money to buy things.

Law of Demand

The Law of Demand States that, other things being constant (Ceteris Peribus), the demand for a good extends with a decrease in price and contracts with an increase in price.

In other words, there is an **inverse relationship** between quantity demanded of a commodity and its price.

The term other thing being constant implies that income of the consumer, his taste and preferences and price of other related goods remains constant.

Assumptions Law of Demand

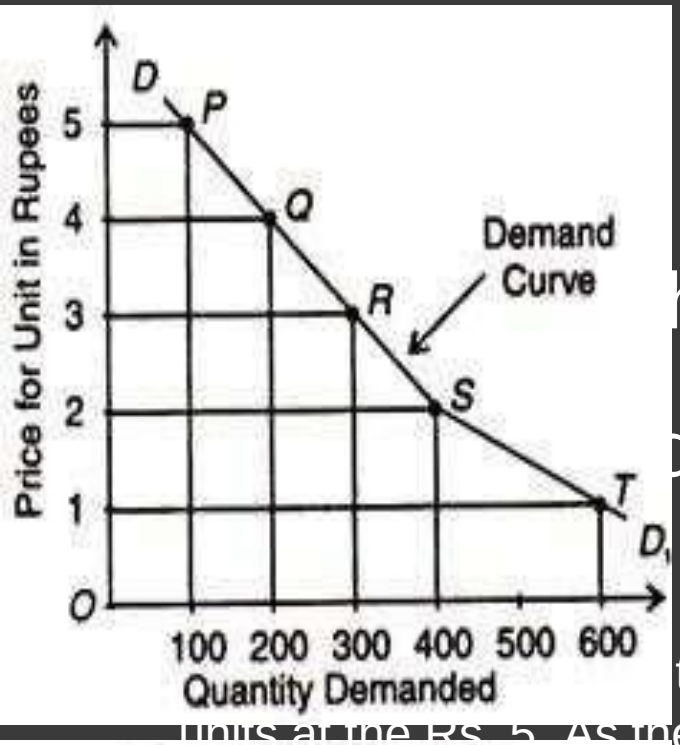
1) **Tastes and Preferences of the consumers remain constant.**

2) **There is no change in the income of the consumer.**

3) **Prices of the related goods do not change.**

4) **Consumers do not expect any change in the price of the commodity in near future.**

Explanation



- The table shows that when the price of say, orange, is Rs. 5 per unit, 100 units are demanded. If the price falls to Rs.4, the demand increases to 200 units.

ases to 600 units. On the
he price increases from Re.

- Similarly, when the price declines to Re.1, the

d continues to decline from

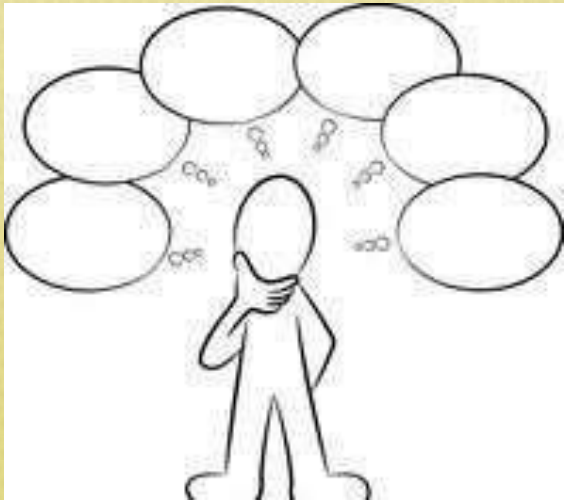
the demand curve DD_1 shows demand for 100
units at the Rs. 5. As the price falls to Rs. 4, Rs. 3, Rs. 2 and Re. 1,
0, 300, 400 and 600 units respectively.

Demand Schedule

Price (Rs)	Quantity Demanded
5	100 Units
4	200 Units
3	300 Units
2	400 Units
1	600 Units

- This is clear from points Q, R, S, and T. Thus, the demand curve DD_1 shows increase in demand of orange when its price falls. This indicates the inverse relation between price and demand.

Why More of a Good is Purchased When its Price Falls?
Or
Why Does Demand Curve Slope Downwards?

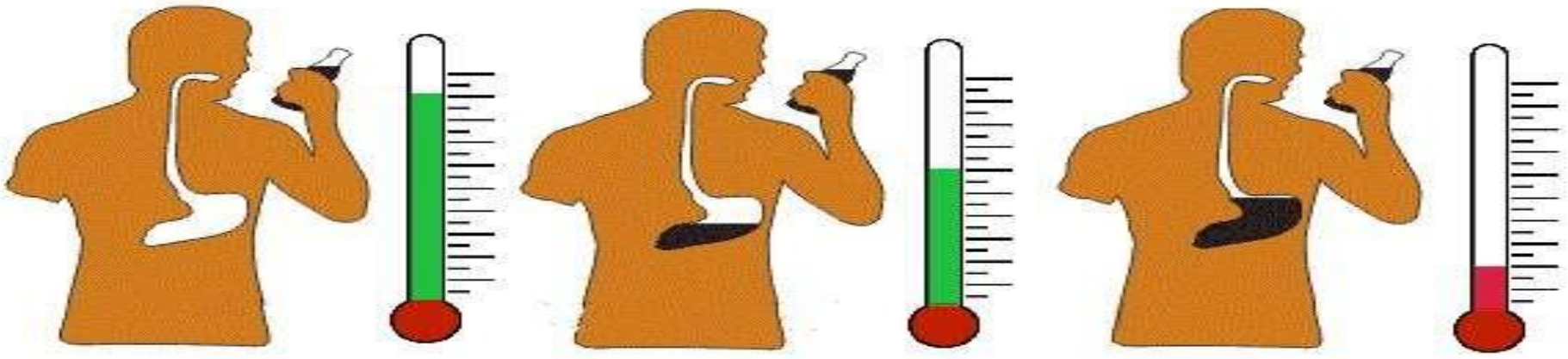


1) Law of Diminishing Marginal Utility:

According to this law, as consumption of a commodity increases, the utility from each successive unit goes on diminishing to a consumer.

Accordingly, for every additional unit to be purchased, the consumer is willing to pay less and less price.

Thus, more is purchased only when price of the commodity falls.



2) Income Effect:

Income effect refers to change in quantity demanded when real income of the buyer changes as a result of change in price of the commodity.

Change in the price of a commodity causes change in real income of the consumer.

With a fall in price, real income increases. Accordingly, demand for the commodity expands.

3) Substitution Effect:

Substitution effect refers to substitution of one commodity for the other when it becomes relatively cheaper.

Thus, when price of commodity X falls, it becomes cheaper in relation to commodity Y. Accordingly, X is substituted for Y.

4) Size of Consumer Group:

When price of a commodity falls, it attracts new buyers who now can afford to buy it.

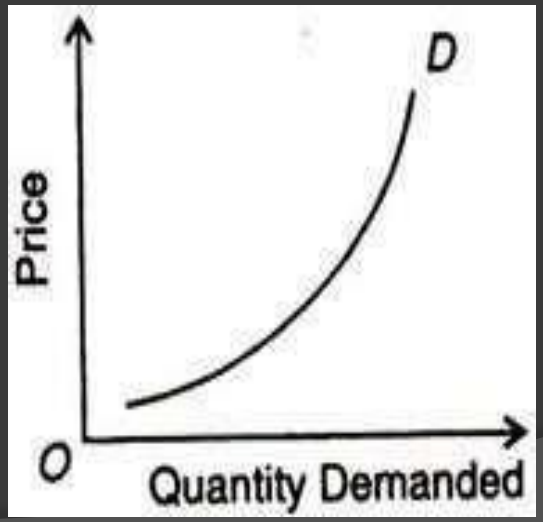
5) Different Uses:

Many goods have alternative uses. Milk, for example, is used for making curd, cheese and butter. If price of milk reduces its uses will expand. Accordingly, demand for milk expands.

Exception to the Law of Demand

In certain cases, the demand curve slopes up from left to right, i.e., it has a positive slope.

Under certain circumstances, consumers buy more when the price of a commodity rises, and less when price falls. Many causes are attributed to an upward sloping demand curve.



Exception to the Law of Demand

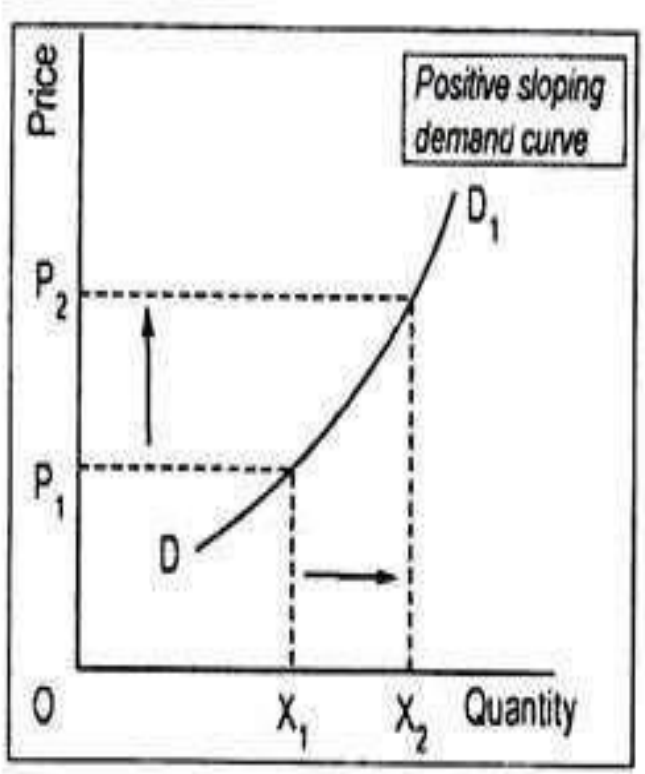


Fig. 2.3: Exceptional Demand Curve

Articles of Distinction: This exception was first of all discussed by **Veblen**.

According to him, articles of distinction have more demand only if their prices are sufficiently high.

Diamond, jewellery, etc; have more demand because their prices are abnormally high. It is so because distinction is bestowed in diamond, jewellery etc**.,** by the society because of their being costly.

If their prices fall, they will no longer be considered as articles of distinction and so their demand will decrease.

Exception to the Law of Demand

2) **The Giffen Goods:**

A study of poor farmers of Ireland by **Sir Giffen** in the 19th century revealed that the major portion of their income was spent on potatoes and only a small amount was spent on meat.

Potatoes were cheap but meat was costly. When the price of potatoes tend to increase consumption of meat was curtailed to economies their expenditure and as a result of this they saved money and spent more on potato to meet their food deficiency.

In this way quantity purchase rises even when prices of potatoes rises.

For Example, Suppose the minimum monthly consumption of food grains by a poor household is 20 Kg Bajra (Inferior good) and 10 Kg Rice (superior good). The selling price of Bajra is Rs 5 per kg, and the rice is Rs 10 per kg, and the household spends its total income of Rs 200 on the purchase of these items. Suppose, the price of Bajra rose to Rs 6 per kg then the household will be forced to reduce the consumption of rice by 5 Kg and increase the quantity of Bajra to 25 Kg in order to meet the minimum monthly requirement of food grains of 30 kg.

Exception to the Law of Demand

3) **Highly Essential Good:**

In case of certain highly essential items such as life- saving drugs, people buy a fixed quantity at all possible price. Heart patients will buy the same quantity of 'medicine' whether price is high or low. Their response to price change is almost nil.

In cases of such commodities, the demand curve is likely to be a vertical straight line . At a price OP_1, the heart patient consumer demands OD amount of 'medicine'. In spite of its price rise to OP_2, the consumer buys the same quantity of it.

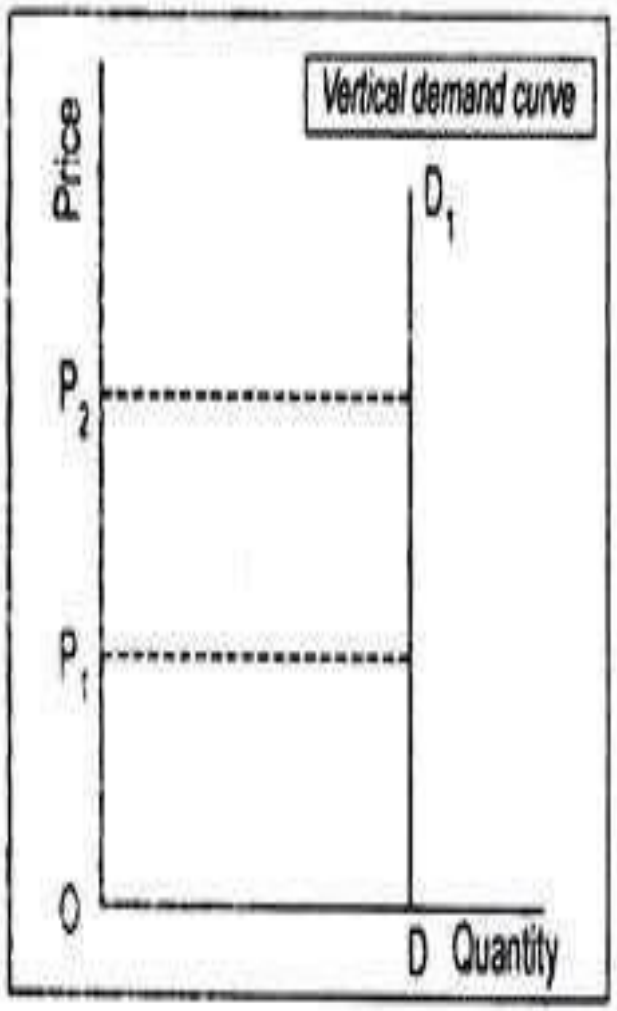


Fig. 2.4: Exceptional Demand Curve

Exception to the Law of Demand

4) **Emergencies:** During emergencies such as war, natural calamity- flood, drought, earthquake, etc., the law of demand becomes ineffective. In such situations, people often fear the shortage of the essentials and hence demand more goods and services even at higher prices.

5) **Bandwagon Effect**: This is the most common type of exception to the law of demand wherein the consumer tries to purchase those commodities which are bought by his friends, relatives or neighbors. Here, the person tries to emulate the buying behavior and patterns of the group to which he belongs irrespective of the price of the commodity

.**For example**, if the majority of group members have smart phones then the consumer will also demand for the smartphone even if the prices are high.

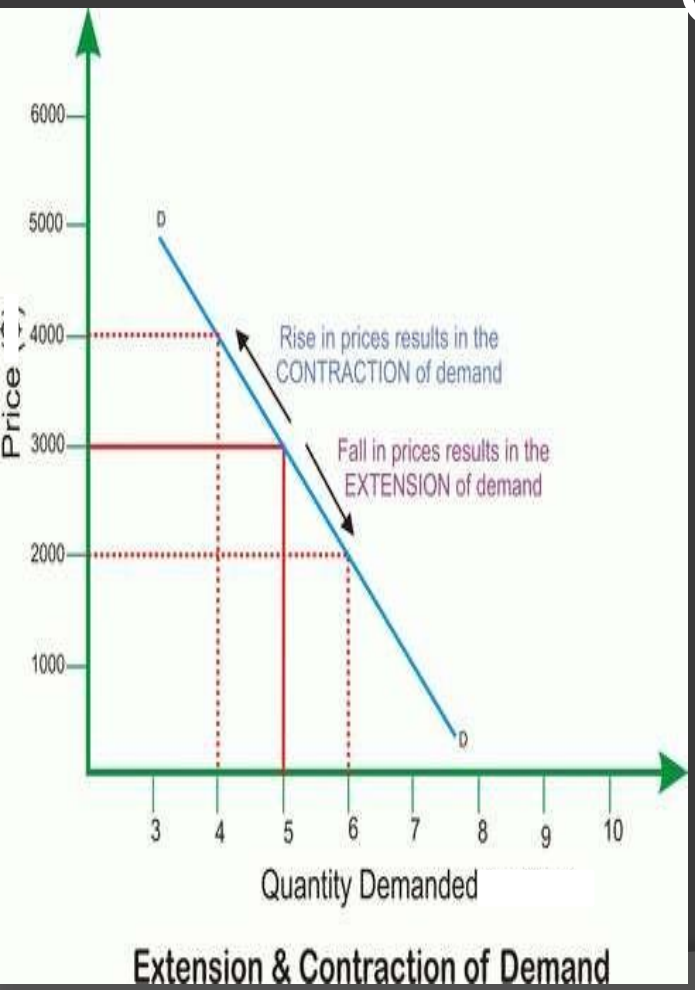
Demanded & Change in Demand

- In economics the terms change in quantity demanded and change in demand are two different concepts.
- Change in quantity demanded refers to change in the quantity purchased due to increase or decrease in the price of a product.
- In such a case, it is incorrect to say increase or decrease in demand rather it is increase or decrease in the quantity demanded.
- On the other hand, change in demand refers to increase or decrease in demand of a product due to various determinants of demand, while keeping price at constant.

Contraction of Demand (Change In Quantity Demanded)

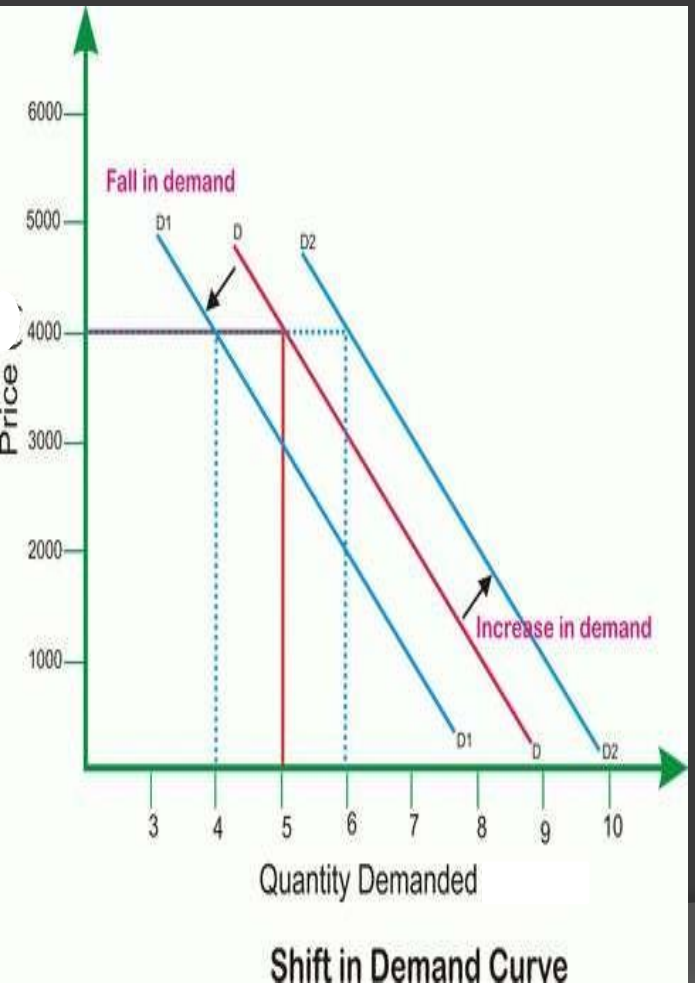
- The variations in the quantities demanded of a product with change in its price, while other factors are at constant, are termed as expansion or contraction of demand. Expansion of demand refers to the period when quantity demanded is more because of the fall in prices of a product. However, contraction of demand takes place when the quantity demanded is less due to rise in the price o a product.

For example, consumers would reduce the consumption of milk in case the prices of milk increases and vice versa. Expansion and contraction are represented by the movement along the same demand curve. Movement from one point to another in a downward direction shows the expansion of demand, while an upward movement demonstrates the contraction of demand.



Extension & Contraction of Demand

Increase and Decrease in Demand (Change in Demand)



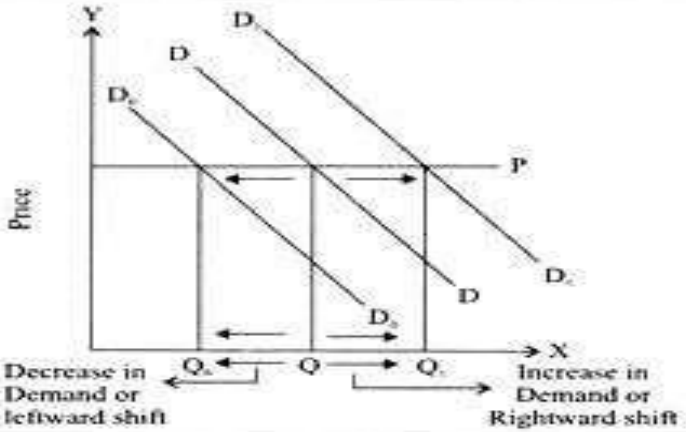
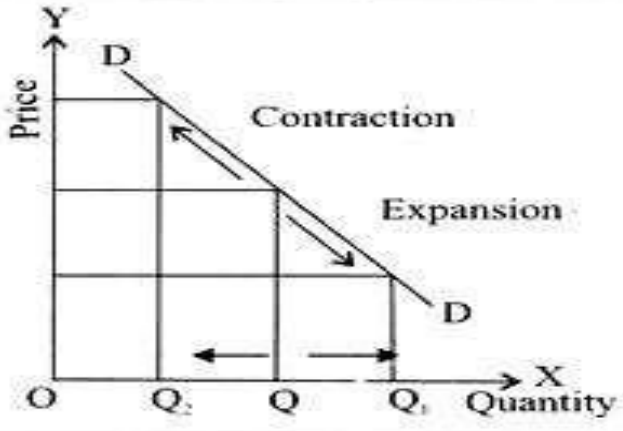
Shift in Demand Curve

- Increase and decrease in demand are referred to change in demand due to changes in various other factors such as change in income, distribution of income, change in consumer's tastes and preferences, change in the price of related goods, while Price factor is kept constant Increase in demand refers to the rise in demand of a product at a given price.

On the other hand, decrease in demand refers to the fall in demand of a product at a given price.

Increase and decrease in demand is represented as the shift in demand curve. In the graphical representation of demand curve, the shifting of demand is demonstrated as the movement from one demand curve to another demand curve. In case of increase in demand, the demand curve shifts to right, while in case of decrease in demand, it shifts to left of the original demand curve.

Demanded &

Basis	Change in Demand (Shift of demand curve)	Change in Quantity Demanded (Movement along the demand curves)
1. Factors responsible for rise or fall	It is increase or decrease in demand of a commodity due to the factors other than price of the commodity.	It is increase or decrease in quantity demanded due to price of the commodity while keeping other factors constant.
2. Price effect	No price effect i.e., At the same price demand is more	Price effect is negative i.e., At a lower price demand is more.
3. Shift of Demand curve	No price effect i.e., In case of increase in demand, demand curve shifts to the right and in case of decrease in demand, demand curve shift to the left.	Demand curve remains the same. However, in case of increase in quantity demanded there is a downward movement and in case of decrease in quantity demanded there is upward movement.
4. Diagram		
5. Demand Schedule	Price 10 10 10 / Quantity demanded 100 50 200	Price 10 15 20 / Quantity demanded 120 100 80


THANK
YOU!

UNIT - II

PRODUCTION FUNCTION

Introduction: The production function expresses a functional relationship between physical inputs and physical outputs of a firm at any particular time period. The output is thus a function of inputs. Mathematically production function can be written as

$$Q= f (A, B, C, D)$$

Where "Q" stands for the quantity of output and A, B, C, D are various input factors such as land, labour, capital and organization. Here output is the function of inputs. Hence output becomes the dependent variable and inputs are the independent variables.

The above function does not state by how much the output of "Q" changes as a consequence of change of variable inputs. In order to express the quantitative relationship between inputs and output, Production function has been expressed in a precise mathematical equation i.e.

$$Y= a+b(x)$$

Which shows that there is a constant relationship between applications of input (the only factor input 'X' in this case) and the amount of output (y) produced.

Importance:

1. When inputs are specified in physical units, production function helps to estimate the level of production.
2. It becomes is equates when different combinations of inputs yield the same level of output.
3. It indicates the manner in which the firm can substitute on input for another without altering the total output.
4. When price is taken into consideration, the production function helps to select the least combination of inputs for the desired output.
5. It considers two types' input-output relationships namely 'law of variable proportions' and 'law of returns to scale'. Law of variable propositions explains the pattern of output in the short-run as the units of variable inputs are increased to increase the output. On the other hand law of returns to scale explains the pattern of output in the long run as all the units of inputs are increased.
6. The production function explains the maximum quantity of output, which can be produced, from any chosen quantities of various inputs or the minimum quantities of various inputs that are required to produce a given quantity of output.

Production function can be fitted the particular firm or industry or for the economy as whole. Production function will change with an improvement in technology.

Assumptions:

Production function has the following assumptions.

1. The production function is related to a particular period of time.
2. There is no change in technology.
3. The producer is using the best techniques available.
4. The factors of production are divisible.
5. Production function can be fitted to a short run or to long run.

Cobb-Douglas production function:

Production function of the linear homogenous type is invested by Junt wicksell and first tested by C. W. Cobb and P. H. Dougles in 1928. This famous statistical production function is known as Cobb-Douglas production function. Originally the function is applied on the empirical study of the American manufacturing industry. Cabb – Douglas production function takes the following mathematical form.

$$Y= (AK^X L^{1-x})$$

Where Y=output
K=Capital
L=Labour
A, ∞=positive constant

Assumptions:

It has the following assumptions

1. The function assumes that output is the function of two factors viz. capital and labour.
2. It is a linear homogenous production function of the first degree
3. The function assumes that the logarithm of the total output of the economy is a linear function of the logarithms of the labour force and capital stock.
4. There are constant returns to scale
5. All inputs are homogenous
6. There is perfect competition
7. There is no change in technology

ISOQUANTS:

The term Isoquants is derived from the words 'iso' and 'quant' – 'Iso' means equal and 'quent' implies quantity. Isoquant therefore, means equal quantity. A family of iso-product curves or isoquants or production difference curves can represent a production function with two variable inputs, which are substitutable for one another within limits.

Iqoquants are the curves, which represent the different combinations of inputs producing a particular quantity of output. Any combination on the isoquant represents the some level of output.

For a given output level firm's production become,

$$Q= f (L, K)$$

Where 'Q', the units of output is a function of the quantity of two inputs 'L' and 'K'.

Thus an isoquant shows all possible combinations of two inputs, which are capable of producing equal or a given level of output. Since each combination yields same output, the producer becomes indifferent towards these combinations.

Assumptions:

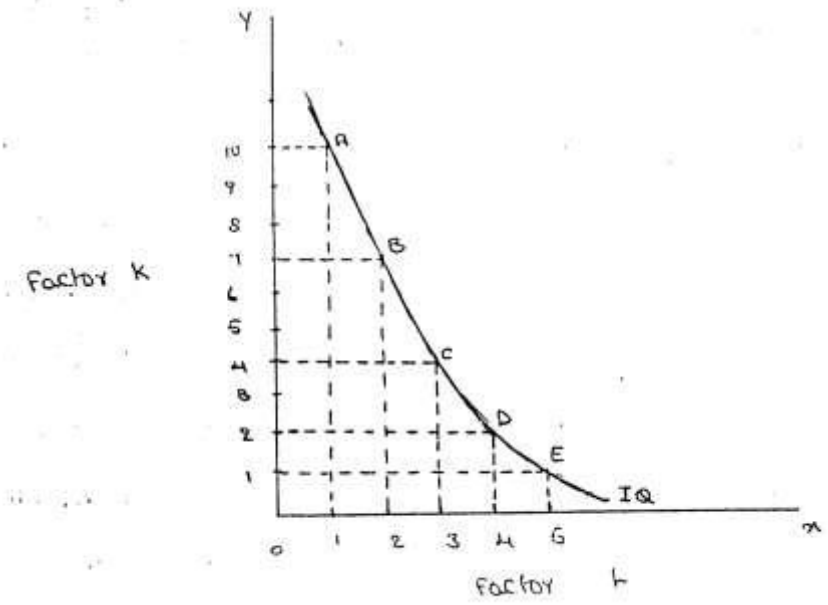
1. There are only two factors of production, viz. labour and capital.
2. The two factors can substitute each other up to certain limit
3. The shape of the isoquant depends upon the extent of substitutability of the two inputs.
4. The technology is given over a period.

An isoquant may be explained with the help of an arithmetical example.

Combinations	Labour (units)	Capital (Units)	Output (quintals)
A	1	10	50
B	2	7	50
C	3	4	50
D	4	4	50
E	5	1	50

Combination 'A' represent 1 unit of labour and 10 units of capital and produces '50' quintals of a product all other combinations in the table are assumed to yield the same

given output of a product say '50' quintals by employing any one of the alternative combinations of the two factors labour and capital. If we plot all these combinations on a paper and join them, we will get continues and smooth curve called Iso-product curve as shown below.



Labour is on the X-axis and capital is on the Y-axis. IQ is the ISO-Product curve which shows all the alternative combinations A, B, C, D, E which can produce 50 quintals of a product.

Producer's Equilibrium:

The tem producer's equilibrium is the counter part of consumer's equilibrium. Just as the consumer is in equilibrium when be secures maximum satisfaction, in the same manner, the producer is in equilibrium when he secures maximum output, with the least cost combination of factors of production.

The optimum position of the producer can be found with the help of iso-product curve. The Iso-product curve or equal product curve or production indifference curve shows different combinations of two factors of production, which yield the same output. This is illustrated as follows.

Let us suppose. The producer can produces the given output of paddy say 100 quintals by employing any one of the following alternative combinations of the two factors labour and capital computation of least cost combination of two inputs.

L Units	K Units	Q Output	L&LP (3Rs.) Cost of labour	KXKP(4Rs.) cost of capital	Total cost
10	45	100	30	180	210
20	28	100	60	112	172
30	16	100	90	64	154
40	12	100	120	48	168
50	8	100	150	32	182

It is clear from the above that 10 units of 'L' combined with 45 units of 'K' would cost the producer Rs. 20/-. But if 17 units reduce 'K' and 10 units increase 'L', the resulting cost would be Rs. 172/-. Substituting 10 more units of 'L' for 12 units of 'K' further reduces cost pf Rs. 154/-/ However, it will not be profitable to continue this substitution process further at the existing prices since the rate of substitution is diminishing rapidly. In the above table the least cost combination is 30 units of 'L' used with 16 units of 'K' when the cost would be minimum at Rs. 154/-. So this is they stage "the producer is in equilibrium".

LAW OF PRODUCTION:

Production analysis in economics theory considers two types of input-output relationships.

1. When quantities of certain inputs, are fixed and others are variable and
2. When all inputs are variable.

These two types of relationships have been explained in the form of laws.

i) Law of variable proportions
ii) Law of returns to scale

I. Law of variable proportions:

The law of variable proportions which is a new name given to old classical concept of "Law of diminishing returns has played a vital role in the modern economics theory. Assume that a firms production function consists of fixed quantities of all inputs (land, equipment, etc.) except labour which is a variable input when the firm expands output by employing more and more labour it alters the proportion between fixed and the variable inputs. The law can be stated as follows:

"When total output or production of a commodity is increased by adding units of a variable input while the quantities of other inputs are held constant, the increase in total production becomes after some point, smaller and smaller".

"If equal increments of one input are added, the inputs of other production services being held constant, beyond a certain point the resulting increments of product will decrease i.e. the marginal product will diminish". (**G. Stigler**)

"As the proportion of one factor in a combination of factors is increased, after a point, first the marginal and then the average product of that factor will diminish". (**F. Benham**)

The law of variable proportions refers to the behaviour of output as the quantity of one Factor is increased Keeping the quantity of other factors fixed and further it states that the marginal product and average product will eventually do cline. This law states three types of productivity an input factor – Total, average and marginal physical productivity.

Assumptions of the Law: The law is based upon the following assumptions:

i) The state of technology remains constant. If there is any improvement in technology, the average and marginal out put will not decrease but increase.
ii) Only one factor of input is made variable and other factors are kept constant. This law does not apply to those cases where the factors must be used in rigidly fixed proportions.
iii) All units of the variable factors are homogenous.

Three stages of law:

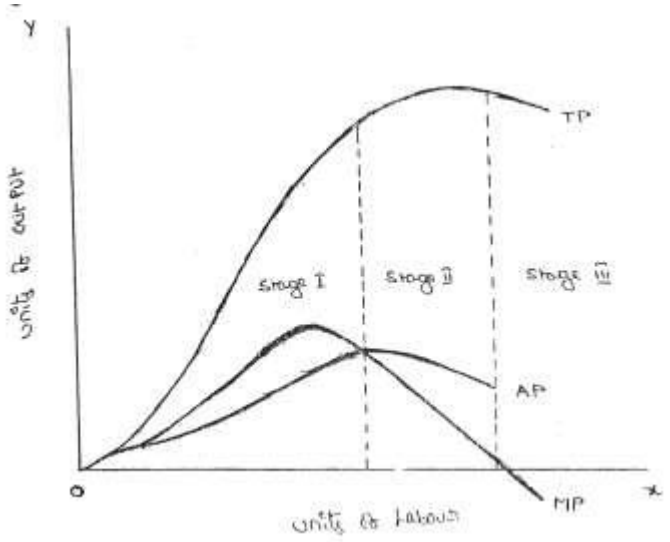
The behaviors of the Output when the varying quantity of one factor is combines with a fixed quantity of the other can be divided in to three district stages. The three stages can be better understood by following the table.

Fixed factor	Variable factor (Labour)	Total product	Average Product	Marginal Product	
1	1	100	100	-	Stage I
1	2	220	120	120	
1	3	270	90	50	
1	4	300	75	30	Stage II
1	5	320	64	20	
1	6	330	55	10	
1	7	330	47	0	Stage III
1	8	320	40	-10	

Above table reveals that both average product and marginal product increase in the beginning and then decline of the two marginal products drops of faster than average product. Total product is maximum when the farmer employs 6^{th} worker, nothing is produced by the 7^{th} worker and its marginal productivity is zero, whereas marginal

product of 8th worker is '-10', by just creating credits 8th worker not only fails to make a positive contribution but leads to a fall in the total output.

Production function with one variable input and the remaining fixed inputs is illustrated as below



From the above graph the law of variable proportions operates in three stages. In the first stage, total product increases at an increasing rate. The marginal product in this stage increases at an increasing rate resulting in a greater increase in total product. The average product also increases. This stage continues up to the point where average product is equal to marginal product. The law of increasing returns is in operation at this stage. The law of diminishing returns starts operating from the second stage awards. At the second stage total product increases only at a diminishing rate. The average product also declines. The second stage comes to an end where total product becomes maximum and marginal product becomes zero. The marginal product becomes negative in the third stage. So the total product also declines. The average product continues to decline.

We can sum up the above relationship thus when 'A.P.' is rising, "M. P.' rises more than " A. P; When 'A. P." is maximum and constant, 'M. P.' becomes equal to 'A. P.' when 'A. P.' starts falling, 'M. P.' falls faster than ' A. P.'.

Thus, the total product, marginal product and average product pass through three phases, viz., increasing diminishing and negative returns stage. The law of variable proportion is nothing but the combination of the law of increasing and demising returns.

II. Law of Returns of Scale:

The law of returns to scale explains the behavior of the total output in response to change in the scale of the firm, i.e., in response to a simultaneous to changes in the scale of the firm, i.e., in response to a simultaneous and proportional increase in all the inputs. More precisely, the Law of returns to scale explains how a simultaneous and proportionate increase in all the inputs affects the total output at its various levels.

The concept of variable proportions is a short-run phenomenon as in these period fixed factors can not be changed and all factors cannot be changed. On the other hand in the long-term all factors can be changed as made variable. When we study the changes in output when all factors or inputs are changed, we study returns to scale. An increase in the scale means that all inputs or factors are increased in the same proportion. In variable proportions, the cooperating factors may be increased or decreased and one faster (Ex. Land in agriculture (or) machinery in industry) remains constant so that the changes in proportion among the factors result in certain changes in output. In returns to scale all the necessary factors or production are increased or decreased to the same extent so that whatever the scale of production, the proportion among the factors remains the same.

When a firm expands, its scale increases all its inputs proportionally, then technically there are three possibilities. (i) The total output may increase proportionately (ii) The total output may increase more than proportionately and (iii) The total output may increase less than proportionately. If increase in the total output is proportional to the increase in input, it means constant returns to scale. If increase in the output is greater than the proportional increase in the inputs, it means increasing return to scale. If increase in the output is less than proportional increase in the inputs, it means diminishing returns to scale.

Let us now explain the laws of returns to scale with the help of isoquants for a two-input and single output production system.

ECONOMIES OF SCALE

Production may be carried on a small scale or o a large scale by a firm. When a firm expands its size of production by increasing all the factors, it secures certain advantages known as economies of production. Marshall has classified these economies of large-scale production into internal economies and external economies.

Internal economies are those, which are opened to a single factory or a single firm independently of the action of other firms. They result from an increase in the scale of output of a firm and cannot be achieved unless output increases. Hence internal economies depend solely upon the size of the firm and are different for different firms.

External economies are those benefits, which are shared in by a number of firms or industries when the scale of production in an industry or groups of industries increases. Hence external economies benefit all firms within the industry as the size of the industry expands.

Causes of internal economies:

Internal economies are generally caused by two factors

1. Indivisibilities 2. Specialization.

1. **Indivisibilities**

Many fixed factors of production are indivisible in the sense that they must be used in a fixed minimum size. For instance, if a worker works half the time, he may be paid half the salary. But he cannot be chopped into half and asked to produce half the current output. Thus as output increases the indivisible factors which were being used below capacity can be utilized to their full capacity thereby reducing costs. Such indivisibilities arise in the case of labour, machines, marketing, finance and research.

2. **Specialization.**

Division of labour, which leads to specialization, is another cause of internal economies. Specialization refers to the limitation of activities within a particular field of production. Specialization may be in labour, capital, machinery and place. For example, the production process may be split into four departments relation to manufacturing, assembling, packing and marketing under the charge of separate managers who may work under the overall charge of the general manger and coordinate the activities of the for departments. Thus specialization will lead to greater productive efficiency and to reduction in costs.

Internal Economies:

Internal economies may be of the following types.

A). Technical Economies.

Technical economies arise to a firm from the use of better machines and superior techniques of production. As a result, production increases and per unit cost of production falls. A large firm, which employs costly and superior plant and equipment, enjoys a technical superiority over a small firm. Another technical economy lies in the mechanical advantage of using large machines. The cost of operating large machines is less than that of operating mall machine. More over a larger firm is able to reduce it's per unit cost of production by linking the various processes of production. Technical economies may also be associated when the large firm is able to utilize all its waste materials for the development of by-products industry. Scope for specialization is also available in a large

firm. This increases the productive capacity of the firm and reduces the unit cost of production.

B). Managerial Economies:

These economies arise due to better and more elaborate management, which only the large size firms can afford. There may be a separate head for manufacturing, assembling, packing, marketing, general administration etc. Each department is under the charge of an expert. Hence the appointment of experts, division of administration into several departments, functional specialization and scientific co-ordination of various works make the management of the firm most efficient.

C). Marketing Economies:

The large firm reaps marketing or commercial economies in buying its requirements and in selling its final products. The large firm generally has a separate marketing department. It can buy and sell on behalf of the firm, when the market trends are more favorable. In the matter of buying they could enjoy advantages like preferential treatment, transport concessions, cheap credit, prompt delivery and fine relation with dealers. Similarly it sells its products more effectively for a higher margin of profit.

D). Financial Economies:

The large firm is able to secure the necessary finances either for block capital purposes or for working capital needs more easily and cheaply. It can barrow from the public, banks and other financial institutions at relatively cheaper rates. It is in this way that a large firm reaps financial economies.

E). Risk bearing Economies:

The large firm produces many commodities and serves wider areas. It is, therefore, able to absorb any shock for its existence. For example, during business depression, the prices fall for every firm. There is also a possibility for market fluctuations in a particular product of the firm. Under such circumstances the risk-bearing economies or survival economies help the bigger firm to survive business crisis.

F). Economies of Research:

A large firm possesses larger resources and can establish it’s own research laboratory and employ trained research workers. The firm may even invent new production techniques for increasing its output and reducing cost.

G). Economies of welfare:

A large firm can provide better working conditions in-and out-side the factory. Facilities like subsidized canteens, crèches for the infants, recreation room, cheap houses, educational and medical facilities tend to increase the productive efficiency of the workers, which helps in raising production and reducing costs.

External Economies.

Business firm enjoys a number of external economies, which are discussed below:

A). Economies of Concentration:

When an industry is concentrated in a particular area, all the member firms reap some common economies like skilled labour, improved means of transport and communications, banking and financial services, supply of power and benefits from subsidiaries. All these facilities tend to lower the unit cost of production of all the firms in the industry.

B). Economies of Information

The industry can set up an information centre which may publish a journal and pass on information regarding the availability of raw materials, modern machines, export potentialities and provide other information needed by the firms. It will benefit all firms and reduction in their costs.

C). Economies of Welfare:

An industry is in a better position to provide welfare facilities to the workers. It may get land at concessional rates and procure special facilities from the local bodies for setting up housing colonies for the workers. It may also establish public health care units, educational institutions both general and technical so that a continuous supply of skilled labour is available to the industry. This will help the efficiency of the workers.

D). Economies of Disintegration:

The firms in an industry may also reap the economies of specialization. When an industry expands, it becomes possible to spilt up some of the processes which are taken over by specialist firms. For example, in the cotton textile industry, some firms may specialize in manufacturing thread, others in printing, still others in dyeing, some in long cloth, some in dhotis, some in shirting etc. As a result the efficiency of the firms specializing in different fields increases and the unit cost of production falls.

Thus internal economies depend upon the size of the firm and external economies depend upon the size of the industry.

DISECONOMIES OF LARGE SCALE PRODUCTION

Internal and external diseconomies are the limits to large-scale production. It is possible that expansion of a firm's output may lead to rise in costs and thus result diseconomies instead of economies. When a firm expands beyond proper limits, it is beyond the capacity of the manager to manage it efficiently. This is an example of an internal diseconomy. In the same manner, the expansion of an industry may result in diseconomies, which may be called external diseconomies. Employment of additional factors of production becomes less efficient and they are obtained at a higher cost. It is in this way that external diseconomies result as an industry expands.

The major diseconomies of large-scale production are discussed below:

Internal Diseconomies:

A). Financial Diseconomies:

For expanding business, the entrepreneur needs finance. But finance may not be easily available in the required amount at the appropriate time. Lack of finance retards the production plans thereby increasing costs of the firm.

B). Managerial diseconomies:

There are difficulties of large-scale management. Supervision becomes a difficult job. Workers do not work efficiently, wastages arise, decision-making becomes difficult, coordination between workers and management disappears and production costs increase.

C). Marketing Diseconomies:

As business is expanded, prices of the factors of production will rise. The cost will therefore rise. Raw materials may not be available in sufficient quantities due to their scarcities. Additional output may depress the price in the market. The demand for the products may fall as a result of changes in tastes and preferences of the people. Hence cost will exceed the revenue.

D). Technical Diseconomies:

There is a limit to the division of labour and splitting down of production p0rocesses. The firm may fail to operate its plant to its maximum capacity. As a result cost per unit increases. Internal diseconomies follow.

E). Diseconomies of Risk-taking:

As the scale of production of a firm expands risks also increase with it. Wrong decision by the management may adversely affect production. In large firms are affected by any disaster, natural or human, the economy will be put to strains.

External Diseconomies:

When many firm get located at a particular place, the costs of transportation increases due to congestion. The firms have to face considerable delays in getting raw materials and sending finished products to the marketing centers. The localization of industries may lead to scarcity of raw material, shortage of various factors of production like labour and capital, shortage of power, finance and equipments. All such external diseconomies tend to raise cost per unit.

INTRODUCTION TO MARKET AND PRICING STRATEGIES

Pricing

Introduction

Pricing is an important, if not the most important function of all enterprises. Since every enterprise is engaged in the production of some goods or/and service. Incurring some expenditure, it must set a price for the same to sell it in the market. It is only in extreme cases that the firm has no say in pricing its product; because there is severe or rather perfect competition in the market of the good happens to be of such public significance that its price is decided by the government. In an overwhelmingly large number of cases, the individual producer plays the role in pricing its product.

It is said that if a firm were good in setting its product price it would certainly flourish in the market. This is because the price is such a parameter that it exerts a direct influence on the products demand as well as on its supply, leading to firm's turnover (sales) and profit. Every manager endeavors to find the price, which would best meet with his firm's objective. If the price is set too high the seller may not find enough customers to buy his product. On the other hand, if the price is set too low the seller may not be able to recover his costs. There is a need for the right price further, since demand and supply conditions are variable over time what is a right price today may not be so tomorrow hence, pricing decision must be reviewed and reformulated from time to time.

Price

Price denotes the exchange value of a unit of good expressed in terms of money. Thus the current price of a maruti car around Rs. 2,00,000, the price of a hair cut is Rs. 25 the price of a economics book is Rs. 150 and so on. Nevertheless, if one gives a little, if one gives a little thought to this subject, one would realize that there is nothing like a unique price for any good. Instead, there are multiple prices.

Price concepts

Price of a well-defined product varies over the types of the buyers, place it is received, credit sale or cash sale, time taken between final production and sale, etc.

It should be obvious to the readers, that the price difference on account of the above four factors are more significant. The multiple prices is more serious in the case of items like cars refrigerators, coal, furniture and bricks and is of little significance for items like shaving blade, soaps, tooth pastes, creams and stationeries. Differences in various prices

of any good are due to differences in transport cost, storage cost accessories, interest cost, intermediaries' profits etc. Once can still conceive of a basic price, which would be exclusive of all these items of cost and then rationalize other prices by adding the cost of special items attached to the particular transaction, in what follows we shall explain the determination of this basis price alone and thus resolve the problem of multiple prices.

Price determinants – Demand and supply

The price of a product is determined by the demand for and supply of that product. According to Marshall the role of these two determinants is like that of a pair of scissors in cutting cloth. It is possible that at times, while one pair is held fixed, the other is moving to cut the cloth. Similarly, it is conceivable that there could be situations under which either demand or supply is playing a passive role, and the other, which is active, alone appear to be determining the price. However, just as one pair of scissors alone can never cut a cloth, demand or supply alone is insufficient to determine the price.

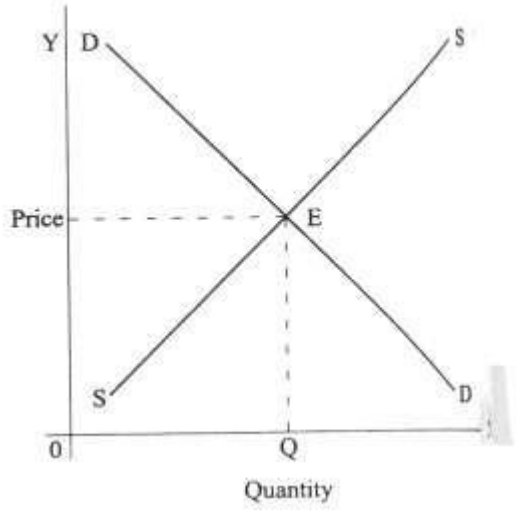
Equilibrium Price

The price at which demand and supply of a commodity is equal known as equilibrium price. The demand and supply schedules of a good are shown in the table below.

Demand supply schedule

Price	Demand	Supply
50	100	200
40	120	180
30	150	150
20	200	110
10	300	50

Of the five possible prices in the above example, price Rs.30 would be the market-clearing price. No other price could prevail in the market. If price is Rs. 50 supply would exceed demand and consequently the producers of this good would not find enough customers for their demand, thereby they would accumulate unwanted inventories of output, which, in turn, would lead to competition among the producers, forcing price to Rs.30. Similarly if price were Rs.10, there would be excess demand, which would give rise to competition among the buyers of good, forcing price to Rs.30. At price Rs.30, demand equals supply and thus both producers and consumers are satisfied. The economist calls such a price as equilibrium price.



It was seen in unit 1 that the demand for a good depends on, a number of factors and thus, every factor, which influences either demand or supply is in fact a determinant of price. Accordingly, a change in demand or/and supply causes price change.

MARKET

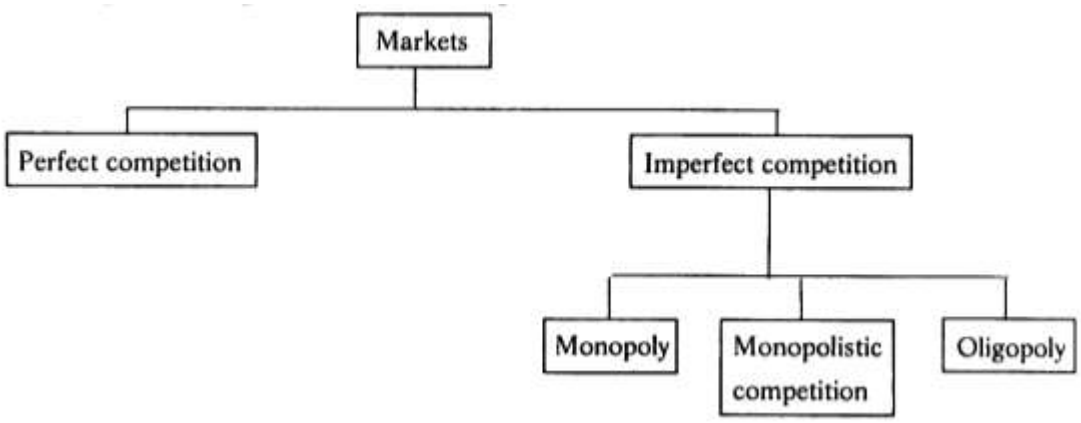
Market is a place where buyer and seller meet, goods and services are offered for the sale and transfer of ownership occurs. A market may be also defined as the demand made by a certain group of potential buyers for a good or service. The former one is a narrow concept and later one, a broader concept. Economists describe a market as a collection of buyers and sellers who transact over a particular product or product class (the housing market, the clothing market, the grain market etc.). For business purpose we define a market as people or organizations with wants (needs) to satisfy, money to spend, and the willingness to spend it. Broadly, market represents the structure and nature of buyers and sellers for a commodity/service and the process by which the price of the commodity or service is established. In this sense, we are referring to the structure of competition and the process of price determination for a commodity or service. The determination of price for a commodity or service depends upon the structure of the market for that commodity or service (i.e., competitive structure of the market). Hence the understanding on the market structure and the nature of competition are a pre-requisite in price determination.

Different Market Structures

Market structure describes the competitive environment in the market for any good or service. A market consists of all firms and individuals who are willing and able to buy or sell a particular product. This includes firms and individuals currently engaged in buying and selling a particular product, as well as potential entrants.

The determination of price is affected by the competitive structure of the market. This is because the firm operates in a market and not in isolation. In marking decisions

concerning economic variables it is affected, as are all institutions in society by its environment.



Perfect Competition

Perfect competition refers to a market structure where competition among the sellers and buyers prevails in its most perfect form. In a perfectly competitive market, a single market price prevails for the commodity, which is determined by the forces of total demand and total supply in the market.

Characteristics of Perfect Competition

The following features characterize a perfectly competitive market:

1. **A large number of buyers and sellers:** The number of buyers and sellers is large and the share of each one of them in the market is so small that none has any influence on the market price.
2. **Homogeneous product:** The product of each seller is totally undifferentiated from those of the others.
3. **Free entry and exit**: Any buyer and seller is free to enter or leave the market of the commodity.
4. **Perfect knowledge**: All buyers and sellers have perfect knowledge about the market for the commodity.
5. **Indifference:** No buyer has a preference to buy from a particular seller and no seller to sell to a particular buyer.
6. **Non-existence of transport costs**: Perfectly competitive market also assumes the non-existence of transport costs.
7. **Perfect mobility of factors of production**: Factors of production must be in a position to move freely into or out of industry and from one firm to the other.

Under such a market no single buyer or seller plays a significant role in price determination. One the other hand all of them jointly determine the price. The price is

determined in the industry, which is composed of all the buyers and seller for the commodity. The demand curve facing the industry is the sum of all consumers' demands at various prices. The industry supply curve is the sum of all sellers' supplies at various prices.

Pure competition and perfect competition

The term perfect competition is used in a wider sense. Pure competition has only limited assumptions. When the assumptions, that large number of buyers and sellers, homogeneous products, free entry and exit are satisfied, there exists pure competition. Competition becomes perfect only when all the assumptions (features) are satisfied. Generally pure competition can be seen in agricultural products.

Equilibrium of a firm and industry under perfect competition

Equilibrium is a position where the firm has no incentive either to expand or contrast its output. The firm is said to be in equilibrium when it earn maximum profit. There are two conditions for attaining equilibrium by a firm. They are:

Marginal cost is an additional cost incurred by a firm for producing and additional unit of output. Marginal revenue is the additional revenue accrued to a firm when it sells one additional unit of output. A firm increases its output so long as its marginal cost becomes equal to marginal revenue. When marginal cost is more than marginal revenue, the firm reduces output as its costs exceed the revenue. It is only at the point where marginal cost is equal to marginal revenue, and then the firm attains equilibrium. Secondly, the marginal cost curve must cut the marginal revenue curve from below. If marginal cost curve cuts the marginal revenue curve from above, the firm is having the scope to increase its output as the marginal cost curve slopes downwards. It is only with the upward sloping marginal cost curve, there the firm attains equilibrium. The reason is that the marginal cost curve when rising cuts the marginal revenue curve from below.

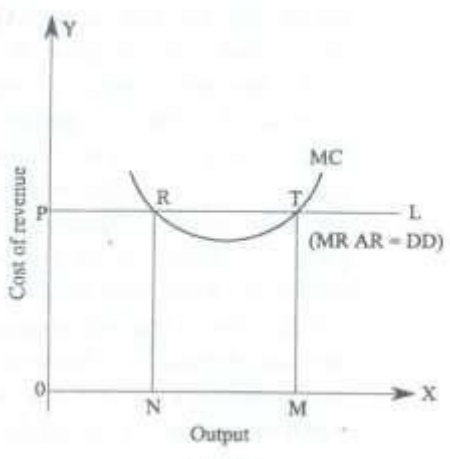


Fig. 6.2

The equilibrium of a perfectly competitive firm may be explained with the help of the fig. 6.2.

In the given fig. PL and MC represent the Price line and Marginal cost curve. PL also represents Marginal revenue, Average revenue and demand. As Marginal revenue, Average revenue and demand are the same in perfect competition, all are equal to the price line. Marginal cost curve is U- shaped curve cutting MR curve at R and T. At point R marginal cost becomes equal to marginal revenue. But MC curve cuts the MR curve fro above. So this is not the equilibrium position. The downward sloping marginal cost curve indicates that the firm can reduce its cost of production by increasing output. As the firm expands its output, it will reach equilibrium at point T. At this point, on price line PL; the two conditions of equilibrium are satisfied. Here the marginal cost and marginal revenue of the firm remain equal. The firm is producing maximum output and is in equilibrium at this stage. If the firm continues its output beyond this stage, its marginal cost exceeds marginal revenue resulting in losses. As the firm has no idea of expanding or contracting its size of out, the firm is said to be in equilibrium at point T.

Pricing under perfect competition

The price or value of a commodity under perfect competition is determined by the demand for and the supply of that commodity.

Under perfect competition there is large number of sellers trading in a homogeneous product. Each firm supplies only very small portion of the market demand. No single buyer or seller is powerful enough to influence the price. The demand of all consumers and the supply of all firms together determine the price. The individual seller is only a price taker and not a price maker. An individual firm has no price policy of it's own. Thus, the main problem of a firm in a perfectly competitive market is not to determine the price of its product but to adjust its output to the given price, So that the profit is maximum. Marshall however gives great importance to the time element for the determination of price. He divided the time periods on the basis of supply and ignored the forces of demand. He classified the time into four periods to determine the price as follows.

1. Very short period or Market period
2. Short period
3. Long period
4. Very long period or secular period

Very short period: It is the period in which the supply is more or less fixed because the time available to the firm to adjust the supply of the commodity to its changed demand is

extremely short; say a single day or a few days. The price determined in this period is known as Market Price.

Short Period: In this period, the time available to firms to adjust the supply of the commodity to its changed demand is, of course, greater than that in the market period. In this period altering the variable factors like raw materials, labour, etc can change supply. During this period new firms cannot enter into the industry.

Long period: In this period, a sufficiently long time is available to the firms to adjust the supply of the commodity fully to the changed demand. In this period not only variable factors of production but also fixed factors of production can be changed. In this period new firms can also enter the industry. The price determined in this period is known as long run normal price.

Secular Period: In this period, a very long time is available to adjust the supply fully to change in demand. This is very long period consisting of a number of decades. As the period is very long it is difficult to lay down principles determining the price.

Price Determination in the market period

The price determined in very short period is known as Market price. Market price is determined by the equilibrium between demand and supply in a market period. The nature of the commodity determines the nature of supply curve in a market period. Under this period goods are classified in to (a) Perishable goods and (b) Non-perishable goods.

Perishable Goods: In the very short period, the supply of perishable goods like fish, milk vegetables etc. cannot be increased. And it cannot be decreased also. As a result the supply curve under very short period will be parallel to the Y-axis or Vertical to X-axis. Supply is perfectly inelastic. The price determination of perishable goods in very short period may be shown with the help of the following fig. 6.5

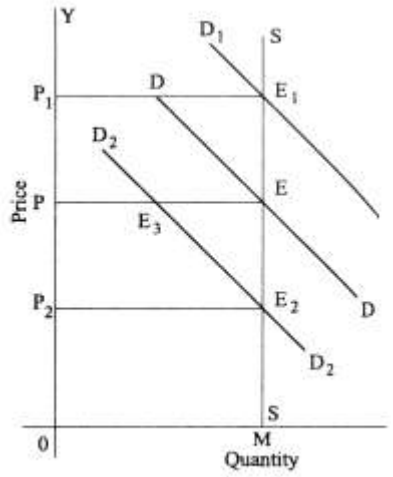


Fig. 6.5

In this figure quantity is represented along X-axis and price is represented along Y-axis. MS is the very short period supply curve of perishable goods. DD is demand curve. It intersects supply curve at E. The price is OP. The quantity exchanged is OM. D1 D1 represents increased demand. This curve cuts the supply curve at E1. Even at the new equilibrium, supply is OM only. But price increases to OP1. So, when demand increases, the price will increase but not the supply. If demand decreases new demand curve will be D2 D2. This curve cuts the supply curve at E2. Even at this new equilibrium, the supply is OM only. But price falls to OP2. Hence in very short period, given the supply, it is the change in demand that influences price. The price determined in a very short period is called Market Price.

Non-perishable goods: In the very short period, the supply of non-perishable goods like cloth, pen, watches etc. cannot be increased. But if price falls, preserving some stock can decrease their supply. If price falls too much, the whole stock will be held back from the market and carried over to the next market period. The price below, which the seller will refuse to sell, is called Reserve Price.

The Price determination of non-perishable goods in very short period may be shown with the help of the following fig 6.6.

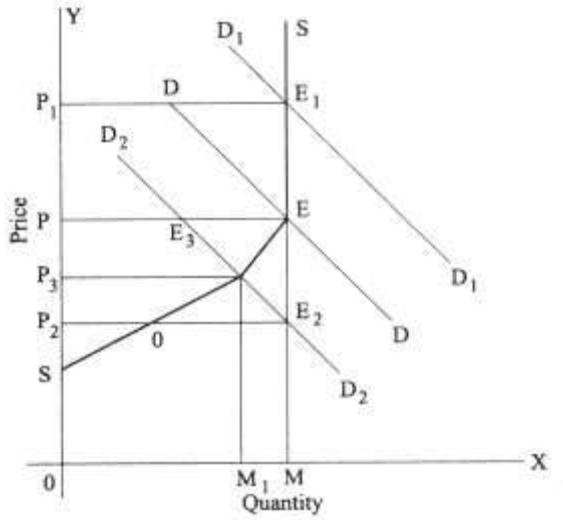


Fig. 6.6

In the given figure quantity is shown on X-axis and the price on Y-axis. SES is the supply curve. It slopes upward up to the point E. From E it becomes a vertical straight line. This is because the quantity existing with sellers is OM, the maximum amount they have is thus OM. Till OM quantity (i.e., point E) the supply curve sloped upward. At the point S, nothing is offered for sale.

It means that the seller with hold the entire stock if the price is OS. OS is thus the reserve price. As the price rises, supply increases up to point E. At OP price (Point E), the entire stock is offered for sale.

Suppose demand increases, the DD curve shift upward. It becomes D1D1 price raises to OP1. If demand decreases, the demand curve becomes D2D2. It intersects the supply curve at E3. The price will fall to OP3. We find that at OS price, supply is zero. It is the reserve price.

Price Determination in the short period

Short period is a period in which supply can be increased by altering the variable factors. In this period fixed costs will remain constant. The supply is increased when price rises and vice versa. So the supply curve slopes upwards from left to right.

The price in short period may be explained with the help of a diagram.

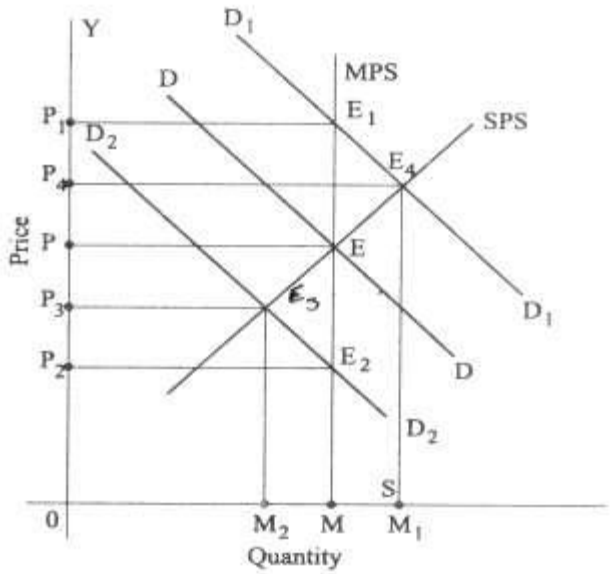


Fig. 6.7

In the given diagram MPS is the market period supply curve. DD is the initial demand curve. It intersects MPS curve at E. The price is OP and out put OM. Suppose demand increases, the demand curve shifts upwards and becomes D1D1. In the very short period, supply remains fixed on OM. The new demand curve D1D1 intersects MPS at E1. The price will rise to OP1. This is what happen in the very short-period.

As the price rises from OP to OP1, firms expand output. As firms can vary some factors but not all, the law of variable proportions operates. This results in new short-run supply curve SPS. It interests D1 D1 curve at E4. The price will fall from OP1 to OP4.

It the demand decreases, DD curve shifts downward and becomes D2D2. It interests MPS curve at E2. The price will fall to OP2. This is what happens in market period. In the short period, the supply curve is SPS. D2D2 curve interests SPS curve at E3. The short period price is higher than the market period price.

Price determination in the long period (Normal Price)

Market price may fluctuate due to a sudden change either on the supply side or on the demand side. A big arrival of milk may decrease the price of that production in the market period. Similarly, a sudden cold wave may raise the price of woolen garments. This type of temporary change in supply and demand may cause changes in market price. In the absence of such disturbing causes, the price tends to come back to a certain level. Marshall called this level is normal price level. In the words of Marshall Normal value (Price) of a commodity is that which economics force would tend to bring about in the long period.

In order to describe how long run normal price is determined, it is useful to refer to the market period as short period also. The market period is so short that no adjustment in the output can be made. Here cost of production has no influence on price. A short period is sufficient only to allow the firms to make only limited output adjustment. In the long period, supply conditions are fully sufficient to meet the changes in demand. In the long period, all factors are alterable and the new firms may enter into or old firms leave the; industry.

In the long period all costs are variable costs. So supply will be increased only when price is equal to average cost.

Hence, in long period normal price will be equal to minimum average cost of the industry. Will this price be more or less than the short period normal price? The answer depends on the stage of returns to which the industry is subject. There are three stages of return on the stage of returns to which the industry is subject. There are three stages of returns.

1. Increasing returns or decreasing costs.
2. Constant Returns or Constant costs.
3. Diminishing returns or increasing costs.

1. **Determination of long period normal price in decreasing cost industry:**

   At this stage, average cost falls due to an increase in the output. So, the supply curve at this stage will slope downwards from left to right. The long period Normal price determination at this stage can be explained with the help of a diagram.

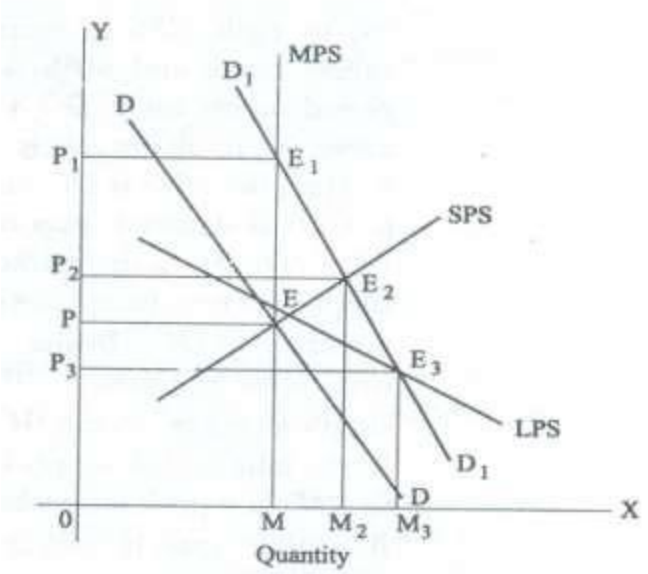


Fig. 6.8

In the diagram, MPS represents market period supply curve. DD is demand curve. DD cuts LPS, SPS and MPS at point E. At point E the supply is OM and the price is OP. If demand increases from DD to D1D1 market price increases to OP1. In the short period it is OP2. In the long period supply increases considerably to OM3. So price has fallen to OP3, which is less than the price of market period.

2. Determination of Long Period Normal Price in Constant Cost Industry:

In this case average cost does not change even though the output increases. Hence long period supply curve is horizontal to X-axis. The determination of long period normal price can be explained with the help of the diagram. In the fig. 6.9, LPS is horizontal to X-axis. MPS represents market period supply curve, and SPS represents short period supply curve. At point 'E' the output is OM and price is OP. If demand increases from DD to D1D1 market price increases to OP1. In the short period, supply increases and hence the price will be OP2. In the long run supply is adjusted fully to meet increased demand. The price remains constant at OP because costs are constant at OP and market is perfect market.

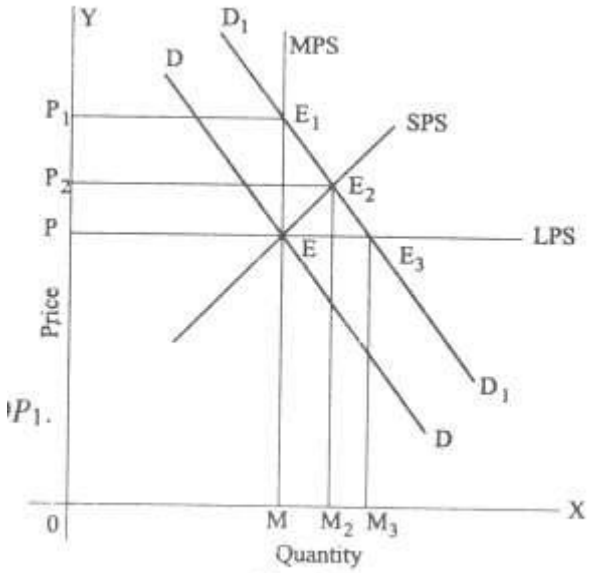


Fig. 6.9

3. Determination of long period normal price in increase cost industry:

If the industry is subject to increasing costs (diminishing returns) the supply curve slopes upwards from left to right like an ordinary supply curve. The determination of long period normal price in increasing cost industry can be explained with the help of the following diagram. In the diagram LPS represents long period supply curve. The industry is subject to diminishing return or increasing costs. So, LPS slopes upwards from left to right. SPS is short period supply curve and MPS is market period supply curve. DD is demand curve. It cuts all the supply curves at E. Here the price is OP and output is OM. If demand increases from DD to D1D1 in the market period, supply will not change but the price increases to OP1. In the short period, price increase but the price increases to OP1. In the short period, price increases to OP2 as the supply increased from OM to OM2. In the long period supply increases to OM3 and price increases to OP3. But this increase in price is less than the price increase in a market period or short period.

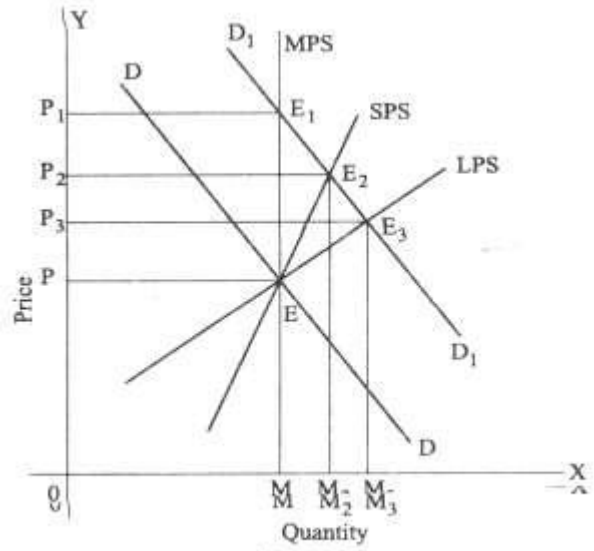


Fig. 6.10

Monopoly

The word monopoly is made up of two syllables, Mono and poly. Mono means single while poly implies selling. Thus monopoly is a form of market organization in which there is only one seller of the commodity. There are no close substitutes for the commodity sold by the seller. Pure monopoly is a market situation in which a single firm sells a product for which there is no good substitute.

Features of monopoly

The following are the features of monopoly.

1. **Single person or a firm:** A single person or a firm controls the total supply of the commodity. There will be no competition for monopoly firm. The monopolist firm is the only firm in the whole industry.
2. **No close substitute:** The goods sold by the monopolist shall not have closely competition substitutes. Even if price of monopoly product increase people will not go in far substitute. For example: If the price of electric bulb increase slightly, consumer will not go in for kerosene lamp.
3. **Large number of Buyers:** Under monopoly, there may be a large number of buyers in the market who compete among themselves.
4. **Price Maker:** Since the monopolist controls the whole supply of a commodity, he is a price-maker, and then he can alter the price.
5. **Supply and Price:** The monopolist can fix either the supply or the price. He cannot fix both. If he charges a very high price, he can sell a small amount. If he wants to

sell more, he has to charge a low price. He cannot sell as much as he wishes for any price he pleases.

6. **Downward Sloping Demand Curve:** The demand curve (average revenue curve) of monopolist slopes downward from left to right. It means that he can sell more only by lowering price.

Types of Monopoly

Monopoly may be classified into various types. The different types of monopolies are explained below:

1. **Legal Monopoly:** If monopoly arises on account of legal support or as a matter of legal privilege, it is called Legal Monopoly. Ex. Patent rights, special brands, trade means, copyright etc.
2. **Voluntary Monopoly:** To get the advantages of monopoly some private firms come together voluntarily to control the supply of a commodity. These are called voluntary monopolies. Generally, these monopolies arise with industrial combinations. These voluntary monopolies are of three kinds (a) cartel (b) trust (c) holding company. It may be called artificial monopoly.
3. **Government Monopoly:** Sometimes the government will take the responsibility of supplying a commodity and avoid private interference. Ex. Water, electricity. These monopolies, created to satisfy social wants, are formed on social considerations. These are also called Social Monopolies.
4. **Private Monopoly:** If the total supply of a good is produced by a single private person or firm, it is called private monopoly. Hindustan Lever Ltd. Is having the monopoly power to produce Lux Soap.
5. **Limited Monopoly:** if the monopolist is having limited power in fixing the price of his product, it is called as 'Limited Monopoly'. It may be due to the fear of distant substitutes or government intervention or the entry of rivals firms.
6. **Unlimited Monopoly:** If the monopolist is having unlimited power in fixing the price of his good or service, it is called unlimited monopoly. Ex. A doctor in a village.
7. **Single Price Monopoly:** When the monopolist charges same price for all units of his product, it is called single price monopoly. Ex. Tata Company charges the same price to all the Tata Indiaca Cars of the same model.
8. **Discriminating Monopoly:** When a Monopolist charges different prices to different consumers for the same product, it is called discriminating monopoly. A doctor may take Rs.20 from a rich man and only Rs.2 from a poor man for the same treatment.
9. **Natural Monopoly:** Sometimes monopoly may arise due to scarcity of natural resources. Nature provides raw materials only in some places. The owner of the place will become monopolist. For Ex. Diamond mine in South Africa.

Pricing under Monopoly

Monopoly refers to a market situation where there is only one seller. He has complete control over the supply of a commodity. He is therefore in a position to fix any price. Under monopoly there is no distinction between a firm and an industry. This is because the entire industry consists of a single firm.

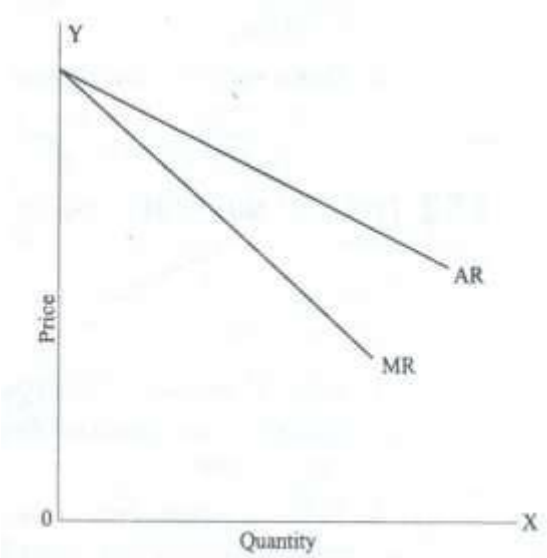


Fig. 6.11

Being the sole producer, the monopolist has complete control over the supply of the commodity. He has also the power to influence the market price. He can raise the price by reducing his output and lower the price by increasing his output. Thus he is a price-maker. He can fix the price to his maximum advantages. But he cannot fix both the supply and the price, simultaneously. He can do one thing at a time. If the fixes the price, his output will be determined by the market demand for his commodity. On the other hand, if he fixes the output to be sold, its market will determine the price for the commodity. Thus his decision to fix either the price or the output is determined by the market demand.

The market demand curve of the monopolist (the average revenue curve) is downward sloping. Its corresponding marginal revenue curve is also downward sloping. But the marginal revenue curve lies below the average revenue curve as shown in the figure. The monopolist faces the down-sloping demand curve because to sell more output, he must reduce the price of his product. The firm's demand curve and industry's demand curve are one and the same. The average cost and marginal cost curve are U shaped curve. Marginal cost falls and rises steeply when compared to average cost.

Price output determination (Equilibrium Point)

The monopolistic firm attains equilibrium when its marginal cost becomes equal to the marginal revenue. The monopolist always desires to make maximum profits. He makes maximum profits when MC=MR. He does not increasing his output if his revenue exceeds his costs. But when the costs exceed the revenue, the monopolist firm incur loses. Hence the monopolist curtails his production. He produces up to that point where additional cost is equal to the additional revenue (MR=MC). Thus point is called equilibrium point. The price output determination under monopoly may be explained with the help of a diagram.

In the diagram 6.12 the quantity supplied or demanded is shown along X-axis. The cost or revenue is shown along Y-axis. AC and MC are the average cost and marginal cost curves respectively. AR and MR curves slope downwards from left to right. AC and MC and U shaped curves. The monopolistic firm attains equilibrium when its marginal cost is equal to marginal revenue (MC=MR). Under monopoly, the MC curve may cut the MR curve from below or from a side. In the diagram, the above condition is satisfied at point E. At point E, MC=MR. The firm is in equilibrium. The equilibrium output is OM.

The above diagram (Average revenue) = MQ or OP
Average cost = MR
Profit per unit = Average Revenue-Average cost=MQ-MR=QR
Total Profit = QRXSR=PQRS

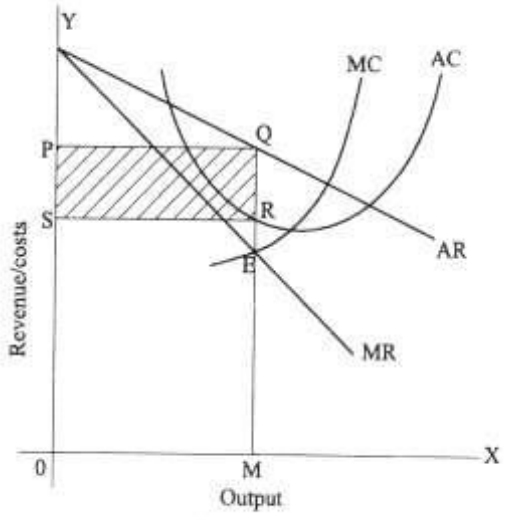


Fig. 6.12

The area PQRS resents the maximum profit earned by the monopoly firm.

But it is not always possible for a monopolist to earn super-normal profits. If the demand and cost situations are not favorable, the monopolist may realize short run losses.

Through the monopolist is a price marker, due to weak demand and high costs; he suffers a loss equal to PABC.

If AR > AC -> Abnormal or super normal profits.
If AR = AC -> Normal Profit
If AR < AC -> Loss

In the long run the firm has time to adjust his plant size or to use existing plant so as to maximize profits.

Monopolistic competition

Perfect competition and pure monopoly are rate phenomena in the real world. Instead, almost every market seems to exhibit characteristics of both perfect competition and monopoly. Hence in the real world it is the state of imperfect competition lying between these two extreme limits that work. Edward. H. Chamberlain developed the theory of monopolistic competition, which presents a more realistic picture of the actual market structure and the nature of competition.

Characteristics of Monopolistic Competition

The important characteristics of monopolistic competition are:

1. **Existence of Many firms:** Industry consists of a large number of sellers, each one of whom does not feel dependent upon others. Every firm acts independently without bothering about the reactions of its rivals. The size is so large that an individual firm has only a relatively small part in the total market, so that each firm has very limited control over the price of the product. As the number is relatively large it is difficult for these firms to determine its price- output policies without considering the possible reactions of the rival forms. A monopolistically competitive firm follows an independent price policy.

2. **Product Differentiation:** Product differentiation means that products are different in some ways, but not altogether so. The products are not identical but the same time they will not be entirely different from each other. IT really means that there are various monopolist firms competing with each other. An example of monopolistic competition and product differentiation is the toothpaste produced by various firms. The product of each firm is different from that of its rivals in one or more respects. Different toothpastes like Colgate, Close-up, Forehans, Cibaca, etc.,

provide an example of monopolistic competition. These products are relatively close substitute for each other but not perfect substitutes. Consumers have definite preferences for the particular verities or brands of products offered for sale by various sellers. Advertisement, packing, trademarks, brand names etc. help differentiation of products even if they are physically identical.

3. **Large Number of Buyers:** There are large number buyers in the market. But the buyers have their own brand preferences. So the sellers are able to exercise a certain degree of monopoly over them. Each seller has to plan various incentive schemes to retain the customers who patronize his products.
4. **Free Entry and Exist of Firms:** As in the perfect competition, in the monopolistic competition too, there is freedom of entry and exit. That is, there is no barrier as found under monopoly.
5. **Selling costs:** Since the products are close substitute much effort is needed to retain the existing consumers and to create new demand. So each firm has to spend a lot on selling cost, which includes cost on advertising and other sale promotion activities.
6. **Imperfect Knowledge:** Imperfect knowledge about the product leads to monopolistic competition. If the buyers are fully aware of the quality of the product they cannot be influenced much by advertisement or other sales promotion techniques. But in the business world we can see that thought the quality of certain products is the same, effective advertisement and sales promotion techniques make certain brands monopolistic. For examples, effective dealer service backed by advertisement-helped popularization of some brands through the quality of almost all the cement available in the market remains the same.
7. **The Group:** Under perfect competition the term industry refers to all collection of firms producing a homogenous product. But under monopolistic competition the products of various firms are not identical through they are close substitutes. Prof. Chamberlin called the collection of firms producing close substitute products as a group.

Price – Output Determination under Monopolistic Competition

Since under monopolistic competition different firms produce different varieties of products, different prices for them will be determined in the market depending upon the demand and cost conditions. Each firm will set the price and output of its own product. Here also the profit will be maximized when marginal revenue is equal to marginal cost.

Short-run equilibrium of the firm:

In the short-run the firm is in equilibrium when marginal Revenue = Marginal Cost. In Fig 6.15 AR is the average revenue curve. NMR marginal revenue curve, SMC short-run marginal cost curve, SAC short-run average cost curve, MR and SMC interest at point E

where output in OM and price MQ (i.e. OP). Thus the equilibrium output or the maximum profit output is OM and the price MQ or OP. When the price (average revenue) is above average cost a firm will be making supernormal profit. From the figure it can be seen that AR is above AC in the equilibrium point. As AR is above AC, this firm is making abnormal profits in the short-run. The abnormal profit per unit is QR, i.e., the difference between AR and AC at equilibrium point and the total supernormal profit is OR X OM. This total abnormal profits is represented by the rectangle PQRS. As the demand curve here is highly elastic, the excess price over marginal cost is rather low. But in monopoly the demand curve is inelastic. So the gap between price and marginal cost will be rather large.

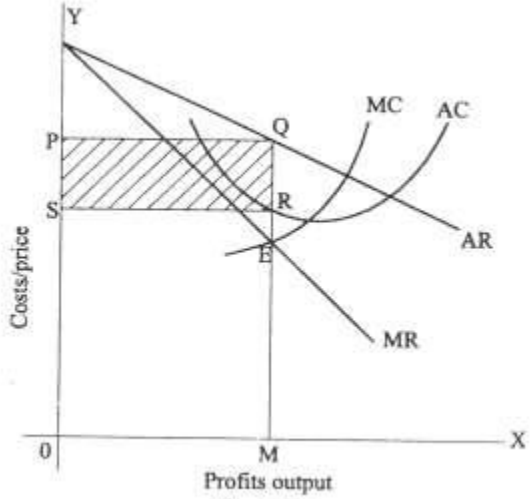


Fig. 6.15

If the demand and cost conditions are less favorable the monopolistically competitive firm may incur loss in the short-run fig 6.16 Illustrates this. A firm incurs loss when the price is less than the average cost of production. MQ is the average cost and OS (i.e. MR) is the price per unit at equilibrium output OM. QR is the loss per unit. The total loss at an output OM is OR X OM. The rectangle PQRS represents the total loses in the short run.

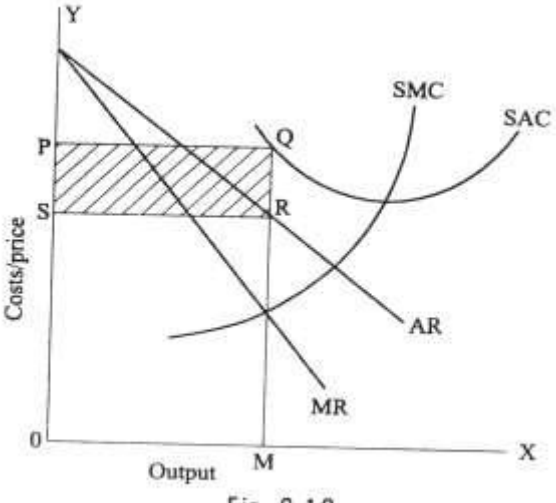


Fig. 6.16

Long – Run Equilibrium of the Firm:

A monopolistically competitive firm will be long – run equilibrium at the output level where marginal cost equal to marginal revenue. Monopolistically competitive firm in the long run attains equilibrium where MC=MR and AC=AR Fig 6.17 shows this trend.

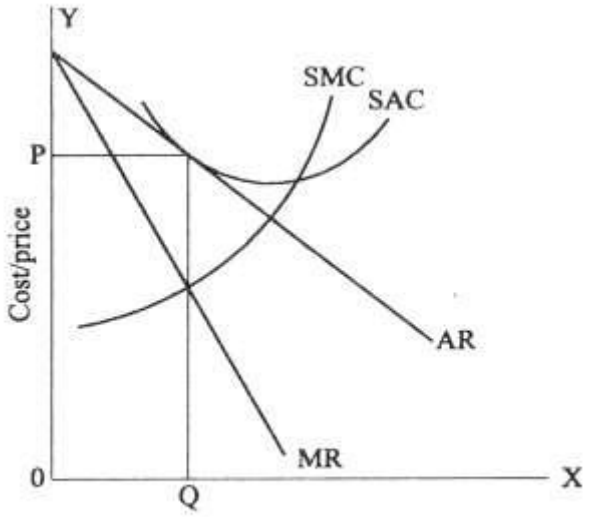


Fig. 6.17

Oligopoly

The term oligopoly is derived from two Greek words, oligos meaning a few, and pollen meaning to sell. Oligopoly is the form of imperfect competition where there are a few firms in the market, producing either a homogeneous product or producing products, which are close but not perfect substitute of each other.

Characteristics of Oligopoly

The main features of oligopoly are:

1. **Few Firms:** There are only a few firms in the industry. Each firm contributes a sizeable share of the total market. Any decision taken by one firm influence the actions of other firms in the industry. The various firms in the industry compete with each other.
2. **Interdependence:** As there are only very few firms, any steps taken by one firm to increase sales, by reducing price or by changing product design or by increasing advertisement expenditure will naturally affect the sales of other firms in the industry. An immediate retaliatory action can be anticipated from the other firms in the industry every time when one firm takes such a decision. He has to take this into account when he takes decisions. So the decisions of all the firms in the industry are interdependent.

3. **Indeterminate Demand Curve:** The interdependence of the firms makes their demand curve indeterminate. When one firm reduces price other firms also will make a cut in their prices. So he firm cannot be certain about the demand for its product. Thus the demand curve facing an oligopolistic firm loses its definiteness and thus is indeterminate as it constantly changes due to the reactions of the rival firms.
4. **Advertising and selling costs:** Advertising plays a greater role in the oligopoly market when compared to other market systems. According to Prof. William J. Banumol "it is only oligopoly that advertising comes fully into its own". A huge expenditure on advertising and sales promotion techniques is needed both to retain the present market share and to increase it. So Banumol concludes "under oligopoly, advertising can become a life-and-death matter where a firm which fails to keep up with the advertising budget of its competitors may find its customers drifting off to rival products."
5. **Price Rigidity:** In the oligopoly market price remain rigid. If one firm reduced price it is with the intention of attracting the customers of other firms in the industry. In order to retain their consumers they will also reduce price. Thus the pricing decision of one firm results in a loss to all the firms in the industry. If one firm increases price. Other firms will remain silent there by allowing that firm to lost its customers. Hence, no firm will be ready to change the prevailing price. It causes price rigidity in the oligopoly market.

OTHER MARKET STRUCTURES

Duopoly

Duopoly refers to a market situation in which there are only two sellers. As there are only two sellers any decision taken by one seller will have reaction from the other Eg. Coca-Cola and Pepsi. Usually these two sellers may agree to co-operate each other and share the market equally between them, So that they can avoid harmful competition.

The duopoly price, in the long run, may be a monopoly price or competitive price, or it may settle at any level between the monopoly price and competitive price. In the short period, duopoly price may even fall below the level competitive price with the both the firms earning less than even the normal price.

Monopsony

Mrs. Joan Robinson was the first writer to use the term monopsony to refer to market, which there is a single buyer. Monoposony is a single buyer or a purchasing agency, which buys the show, or nearly whole of a commodity or service produced. It may be created when all consumers of a commodity are organized together and/or when only one consumer requires that commodity which no one else requires.

Bilateral Monopoly

A bilateral monopoly is a market situation in which a single seller (Monopoly) faces a single buyer (Monoposony). It is a market of monopoly-monoposy.

Oligopsony

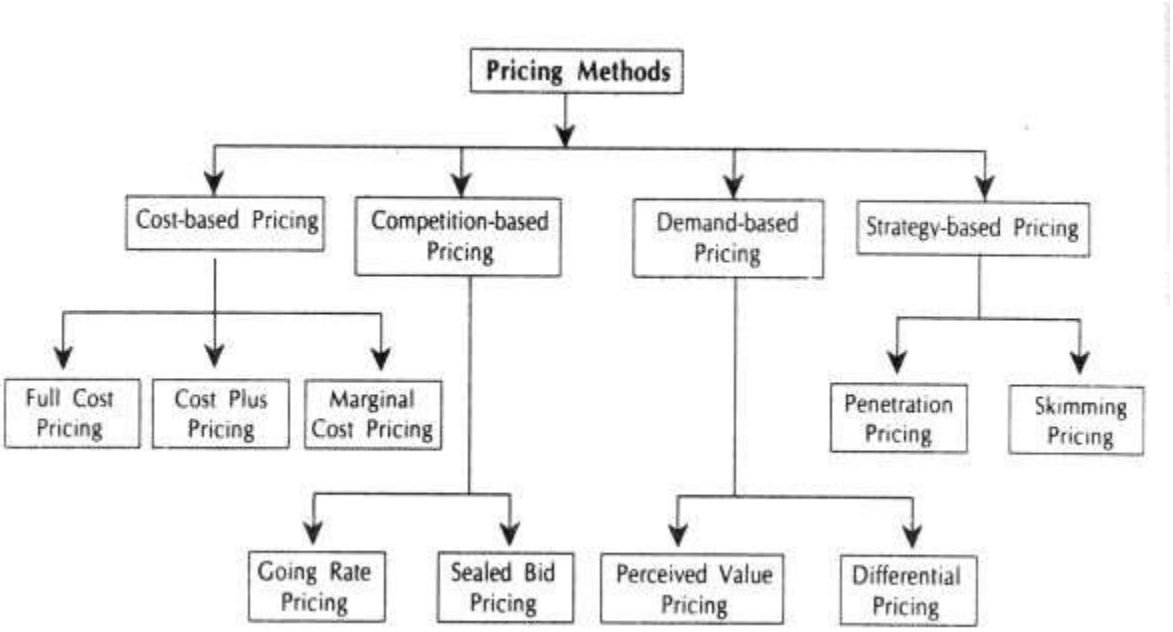
Oligopsony is a market situation in which there will be a few buyers and many sellers. As the sellers are more and buyers are few, the price of product will be comparatively low but not as low as under monopoly.

PRICING METHODS

The micro – economic principle of profit maximization suggests pricing by the marginal analysis. That is by equating MR to MC. However the pricing methods followed by the firms in practice around the world rarely follow this procedure. This is for two reasons; uncertainty with regard to demand and cost function and the deviation from the objective of short run profit maximization.

It was seen that there is no unique theory of firm behavior. While profit certainly on important variable for which every firm cares. Maximization of short – run profit is not a popular objective of a firm today. At the most firms seek maximum profit in the long run. If so the problem is dynamic and its solution requires accurate knowledge of demand and cost conditions over time. Which is impossible to come by?

In view of these problems economic prices are a rare phenomenon. Instead, firms set prices for their products through several alternative means. The important pricing methods followed in practice are shown in the chart.



Cost Based Pricing

There are three versions of the cost – based pricing. Full – cost or break even pricing, cost plus pricing and the marginal cost pricing. Under the first version, price just equals the average (total) cost. In the second version, some mark-up is added to the average cost in arriving at the price. In the last version, price is set equal to the marginal cost. While all these methods appear to be easy and straight forward, they are in fact associated with a number of difficulties. Even through difficulties are there, the cost- oriented pricing is quite popular today.

The cost – based pricing has several strengths as well as limitations. The advantages are its simplicity, acceptability and consistency with the target rate of return on investment and the price stability in general. The limitations are difficulties in getting accurate estimates of cost (particularly of the future cost rather than the historic cost) Volatile nature of the variable cost and its ignoring of the demand side of the market etc.

Competition based pricing

Some commodities are priced according to the competition in their markets. Thus we have the going rate method of price and the sealed bid pricing technique. Under the former a firm prices its new product according to the prevailing prices of comparable products in the market. If the product is new in the country, then its import cost – inclusive of the costs of certificates, insurance, and freight and customs duty, is used as the basis for pricing, Incidentally, the price is not necessarily equal to the import cost, but to the firm is either new in the country, or is a close substitute or complimentary to some other products, the prices of hitherto existing bands or / and of the related goods are taken in to

a account while deciding its price. Thus, when television was first manufactures in India, its import cost must have been a guiding force in its price determination. Similarly, when

maruti car was first manufactured in India, it must have taken into account the prices of existing cars, price of petrol, price of car accessories, etc. Needless to say, the going rate price could be below or above the average cost and it could even be an economic price.

The sealed bid pricing method is quite popular in the case of construction activities and in the disposition of used produces. In this method the prospective seller (buyers) are asked to quote their prices through a sealed cover, all the offers are opened at a preannounce time in the presence of all the competitors, and the one who quoted the least is awarded the contract (purchase / sale deed). As it sound, this method is totally competition based and if the competitors unit by any change, the buyers (seller) may have to pay (receive) an exorbitantly high (too low) price, thus there is a great degree of risk attached to this method of pricing.

Demand Based Pricing

The demand – based pricing and strategy – based pricing are quite related. The seller knows rather well that the demand for its product is a decreasing function of the price its sets for product. Thus if seller wishes to sell more he must reduce the price of his product, and if he wants a good price for his product, he could sell only a limited quantity of his good. Demand oriented pricing rules imply establishment of prices in accordance with consumer preference and perceptions and the intensity of demand.

Two general types demand oriented pricing rules can be identified.

i. Perceived value pricing and
ii. Differential pricing

Perceived value pricing considers the buyer's perception of the value of the product ad the basis of pricing. Here the pricing rule is that the firm must develop procedures for measuring the relative value of the product as perceived by consumers. Differential pricing is nothing but price discrimination. In involves selling a product or service for different prices in different market segments. Price differentiation depends on geographical location of the consumers, type of consumer, purchasing quantity, season, time of the service etc. E.g. Telephone charges, APSRTC charges.

Strategy based pricing (new product pricing)

A firm which products a new product, if it is also new to industry, can earn very good profits it if handles marketing carefully, because of the uniqueness of the product. The price fixed for the new product must keep the competitors away. Earn good profits for the firm over the life of the product and must help to get the product accepted. The company can select either skimming pricing or penetration pricing.

While there are some firms, which follow the strategy of price penetration, there are some others who opt for price – skimming. Under the former, firms sell their new product at a low price in the beginning in order to catch the attention of consumers, once the product image and credibility is established, the seller slowly starts jacking up the price to reap good profits in future. Under this strategy, a firm might well sell its product below the cost of production and thus runs into losses to start with but eventually it recovers all its losses and even makes good overall profits. The Rin washing soap perhaps falls into this category. This soap was sold at a rather low price in the beginning and the firm even distributed free samples. Today, it is quite an expensive brand and yet it is selling very well. Under the price – skimming strategy, the new product is priced high in the beginning, and its price is reduced gradually as it faces a dearth of buyers such a strategy may be beneficial for products, which are fancy, but of poor quality and / or of insignificant use over a period of time.

A prudent producer follows a good mix of the various pricing methods rather than adapting any once of them. This is because no method is perfect and every method has certain good features further a firm might adopt one method at one time and another method at some other accession.

CHAPTER 8

MARKET STRUCTURE

- This chapter covers the types of market such as perfect competition, monopoly, oligopoly and monopolistic competition, in which business firms operate.

Market Structure

- Basically, when we hear the word **market**, we think of a place where goods are being bought and sold.

- In economics, market is a place where buyers and sellers are exchanging goods and services with the following considerations such as:
  - Types of goods and services being traded
  - The number and size of buyers and sellers in the market
  - The degree to which information can flow freely

Two Types of Market Structure

- Perfect or Pure Market
- Imperfect Market

Perfect Market

Perfect Market is a market situation which consists of a very large number of buyers and sellers offering a homogeneous product. Under such condition, no firm can affect the market price. Price is determined through the market demand and supply of the particular product, since no single buyer or seller has any control over the price.

Perfect Competition is built on two critical assumptions:

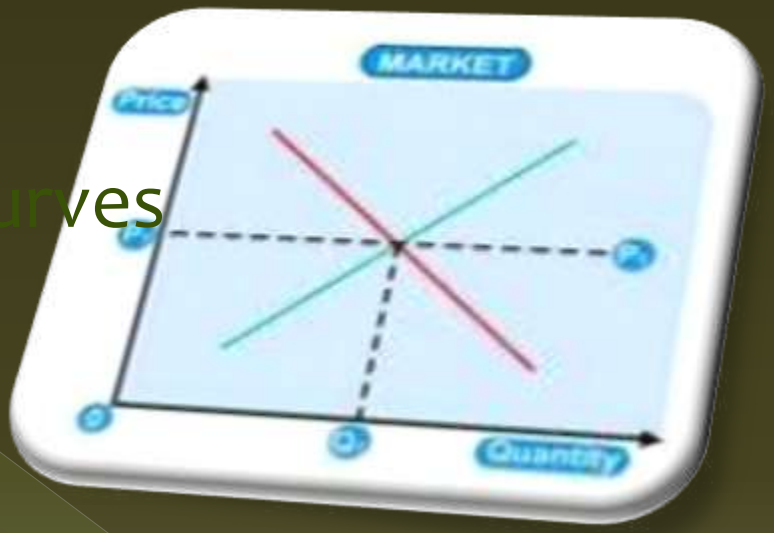
- The behavior of an individual firm
- The nature of the industry in which it operates

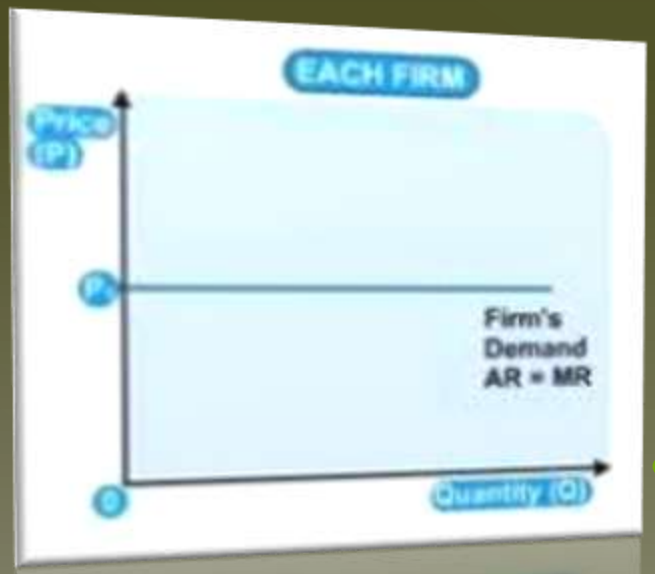
- The firm is assumed to be a price taker
- The industry is characterized by freedom of entry and exit

Demand curves for industry and firm in perfect competition

Industry

- Normal demand and supply curves
- More supply at higher price





Firm

- Price takers
- Have to accept the industry price

Perfect Competition cannot be found in the real world. For such to exist, the following conditions must be observed and required:

- A large number of sellers
- Selling a homogenous product
- No artificial restrictions placed upon price or quantity
- Easy entry and exit
- All buyers and sellers have perfect knowledge of market conditions and of any changes that occur in the market
- Firms are “price takers”

Characteristics of Perfect Competition

- There are very many small firms
- All producers of a good sell the same product
- There are no barriers to enter the market
- All consumers and producers have ‘perfect information’
- Firms sell all they produce, but they cannot set a price.

Short-run Analysis of Perfect Competition

- The firm's objective is to produce the level of output that will maximize profit
- Some inputs are variable and therefore fixed costs arise regardless whether the firm is operating or not
- Since the firm is a price taker, it has no control on the price of a product

Short-run equilibrium under a Perfect Competition Market

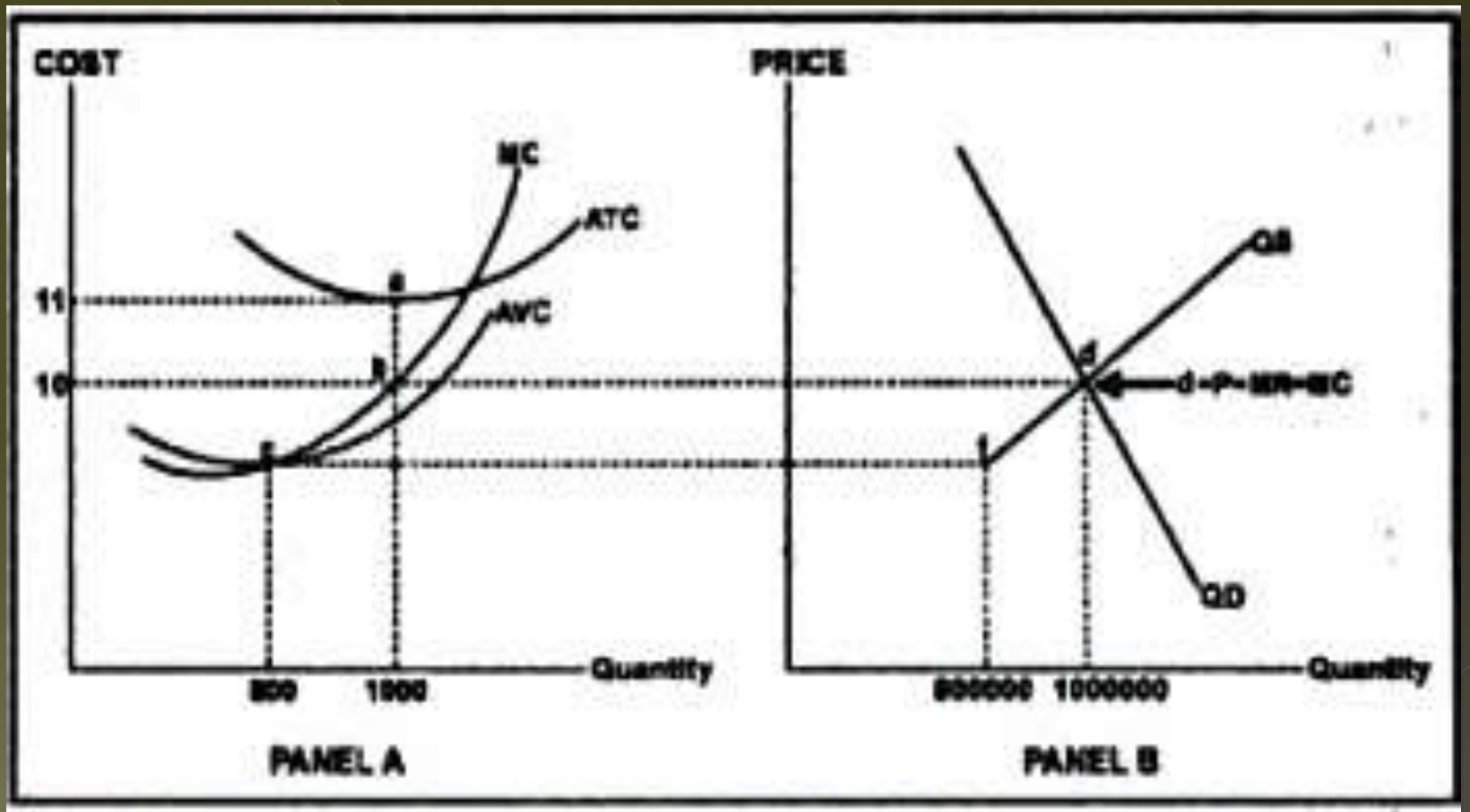


Figure 82. Short-run Equilibrium under Perfect Competition

Long-run Analysis of Perfect Competition

- All inputs and costs of production are variable
- The firm can build most appropriate scale of plant to produce the optimum level of output

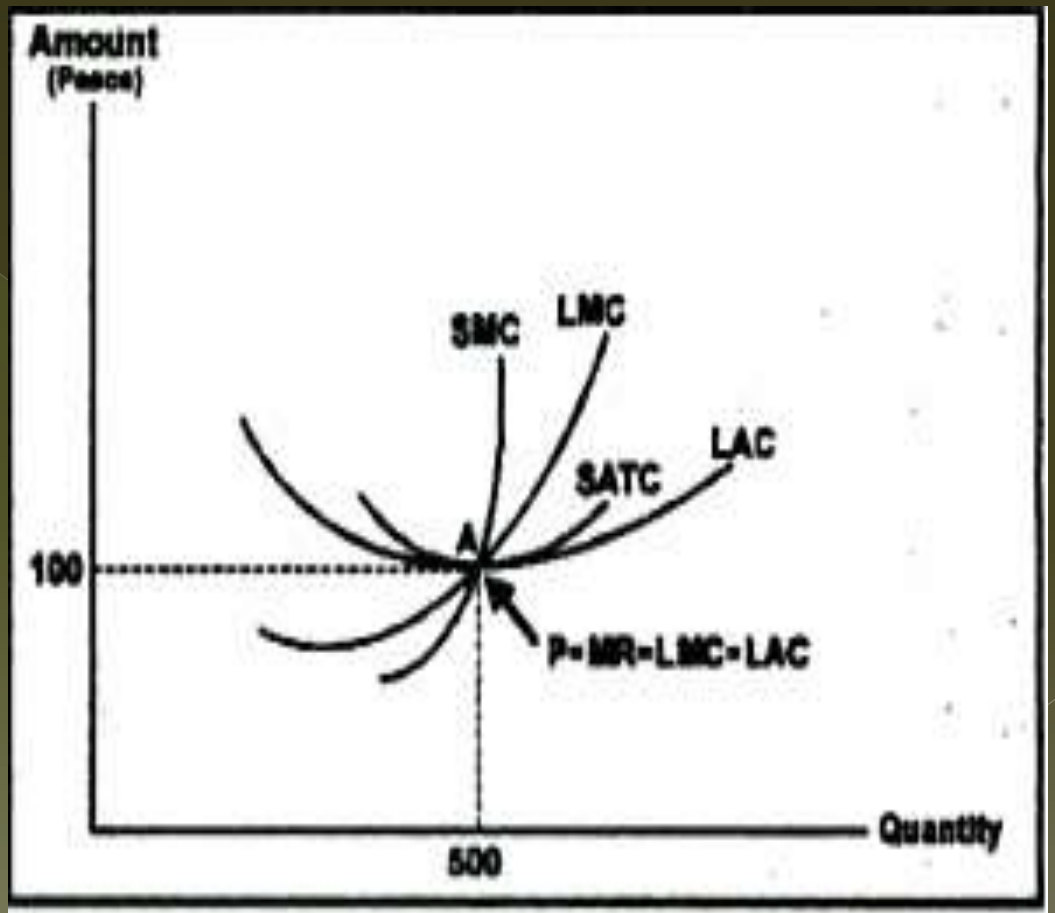


Figure 83. Long-run Analysis of Perfect Competition

Imperfect Market

In economic theory, *imperfect competition* is a type of market structure showing some but not all features of competitive markets.

Forms of imperfect competition include:

- Monopoly
- Oligopoly
- Monopolistic competition

Monopoly

- comes from a Greek word ‘monos’ which means ‘one’ and ‘polein’ means to ‘sell’
- There is only one seller of goods or services

A monopoly should be distinguished from a *cartel*.

(Cartel refers to a market situation in which firms agree to cooperate with one another to behave as if they were a single firm and thus eliminate competitive behavior among them.)

Sources of Monopoly

- There is only one producer or seller of goods and only one provider of services in the market.
- New firms find extreme difficulty in entering the market. The existing monopolist is considered giant in its field or industry.
- There are no available substitute goods or services so that it is considered unique.
- It controls the total supply of raw materials in the industry and has no control over price.
- It owns a patent or copyright.
- Its operations are under economies of scale.

Classifications of Monopoly

Monopolies are classified according to circumstances they arise from, that is, cost structure of the industry, possibly the result of law, or by other means.

Natural Monopoly

- is a market situation where is a single firm can supply the entire market due to the fundamental cost structure of the industry.

Legal Monopoly

- is sometimes called as de jure monopoly, a form of monopoly which the government grants to a private individual or firm over the product or services.

Coercive Monopoly

- is a form of monopoly whose existence as the sole producer and distributor of goods and services is by means of coercion (legal or illegal), so that most of the time it violates the principle of free market just to avoid competition.

Short-run Analysis of Monopoly

A monopolist is considered a price maker, since he is the sole seller of a product that has no close substitute in the market.

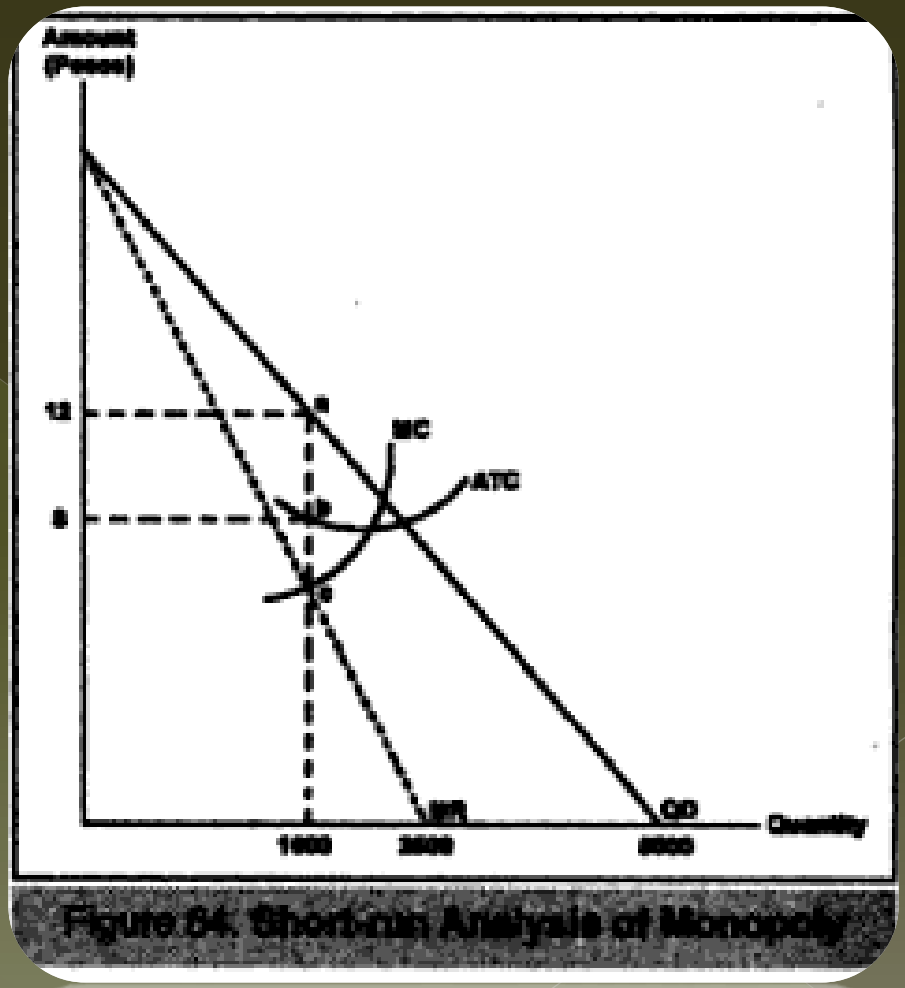


Figure 04. Short-run Analysis of Monopoly

Long-run Analysis of Monopoly

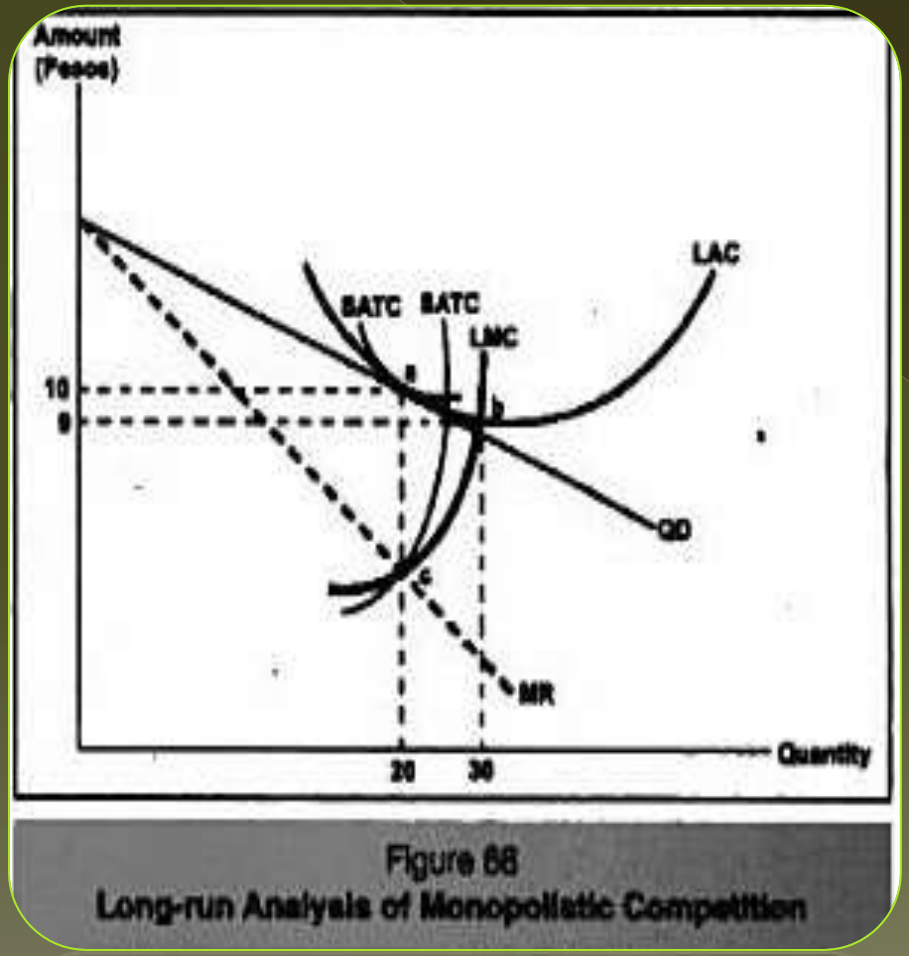


Figure 68
Long-run Analysis of Monopolistic Competition

In the long-run, all inputs and costs are variable, and the monopolist can make his optimal scale of plant to make the best level of output.

Oligopoly

- comes from the Greek word "oligo" which means 'few' and "polein" means 'to sell'.
- small number of sellers, each aware of the action of others
- All decisions depend on how the firms behave in relation to each other

- In oligopoly, *conjectural interdependence* is present, that is, the decision of one firm influences and are influenced by the decision of other firms in the market.

Characteristics of an Oligopoly

- There are a small number of firms in the market selling differentiated or identical products.
- The firm has control over price because of the small number of firms providing the entire supply of a certain product.
- There is an extreme difficulty for new competitors to enter the market.

Types of Oligopoly

1. Pure or Perfect Oligopoly
   - If the firms produce homogeneous products
2. Imperfect or Differentiated Oligopoly
   - If the firms produce differentiated products
3. Collusive Oligopoly
   - If the firms cooperate with each other in determining price or output or both
4. Non-collusive Oligopoly
   - If firms in an oligopoly market compete with each other

Types of Organization of Oligopoly

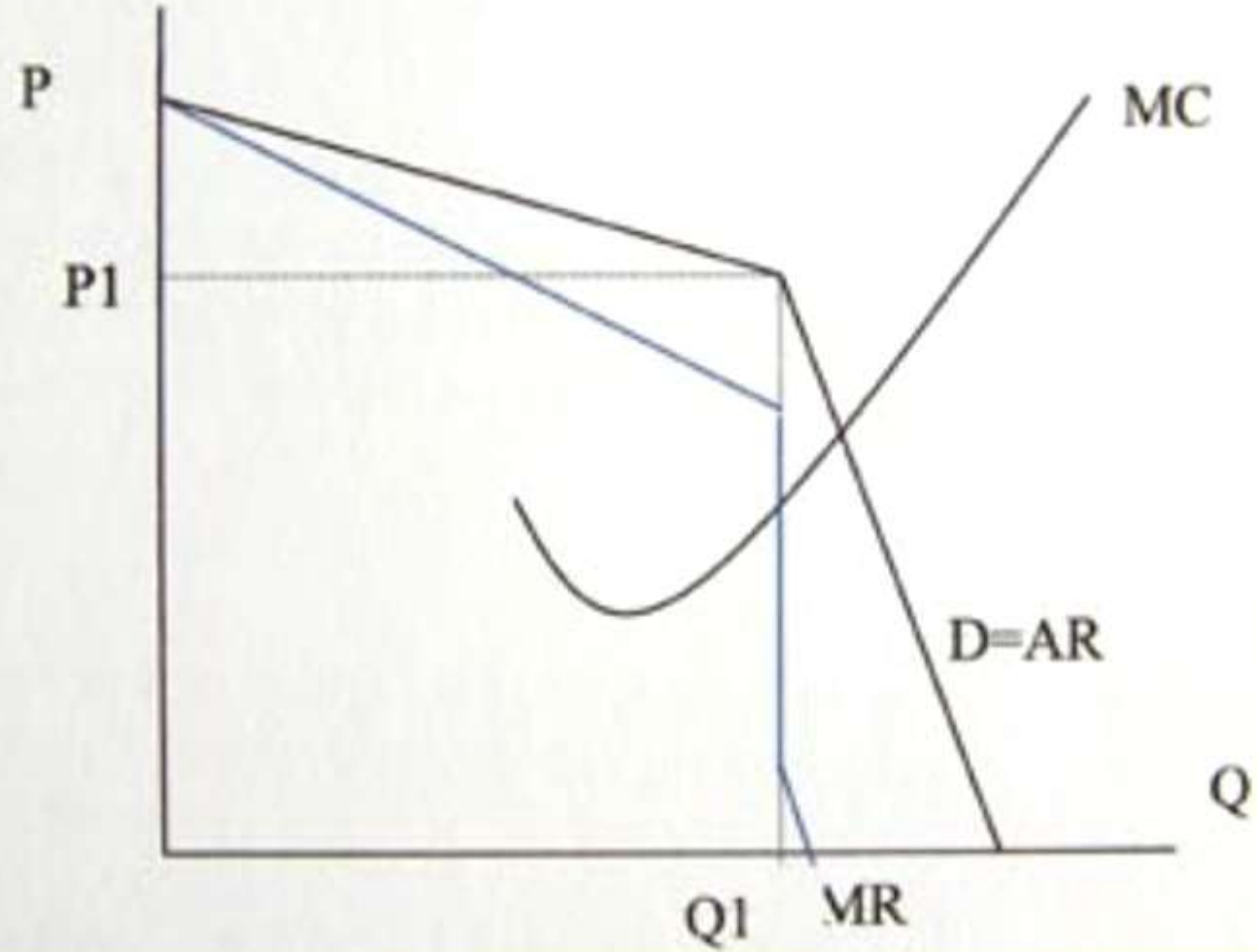
Cartel is a formal agreement among oligopolists to set-up a monopoly price, allocate output, and share profit among members.

Collusion is a formal or an informal agreement among oligopolists to adopt policies that will restrict or reduce the level of competition in the market.

Analyzing Oligopoly using Kinked Demand Curve

- Kinked demand curve is defined as the demand curve of the individual firm in oligopolistic market. It has a "kink" at the existing price caused by the firm's expectation of the actions its rivals are likely to take if the firm changes its price.

The Kinked Demand curve



Monopolistic Competition

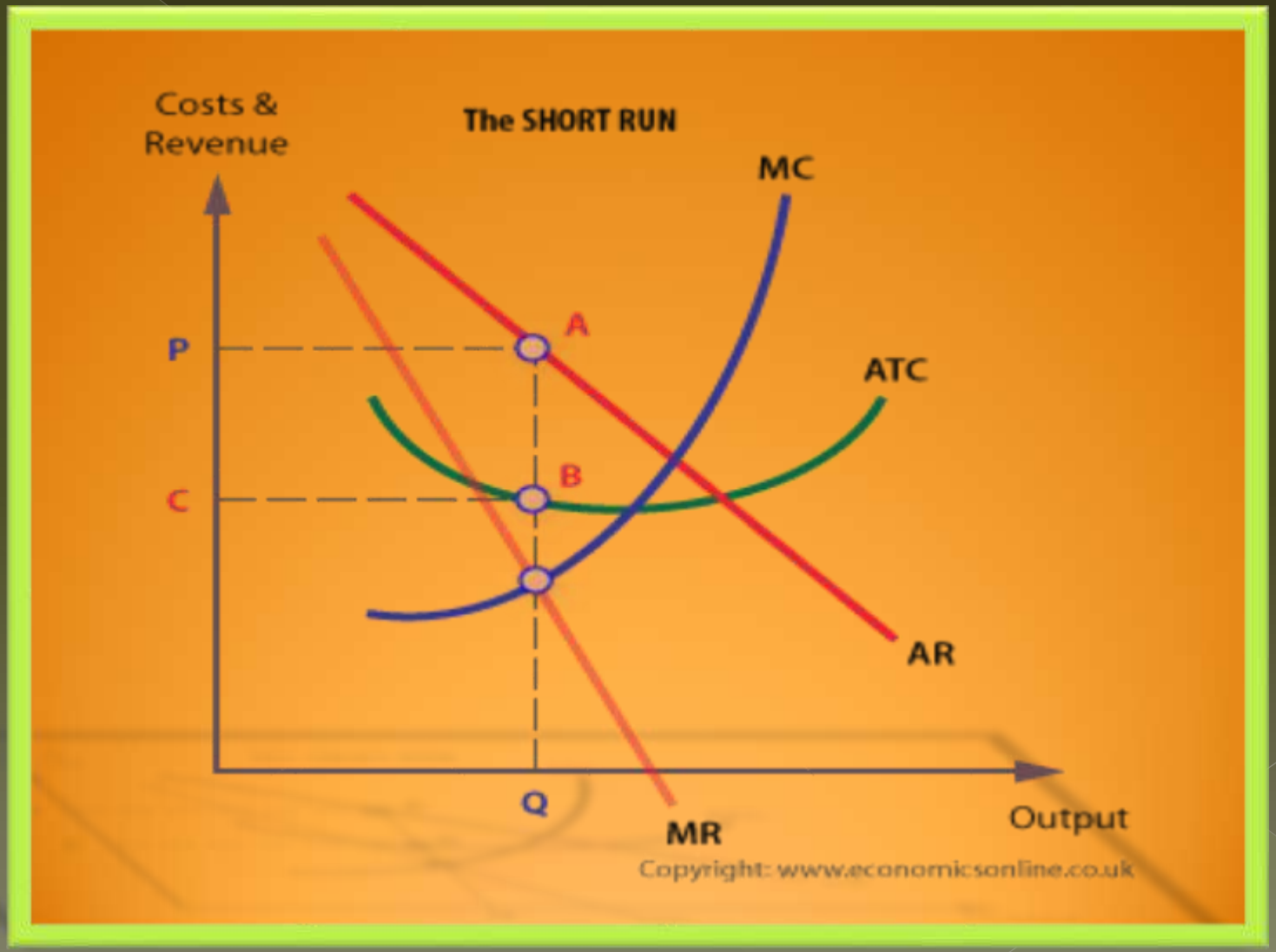
- Market situation in which there are many sellers producing highly differentiated products.
- Monopolistic competition is also perfect competition plus product differentiation.

- Product differentiation gives each monopolistic competitor some market power, since each competitor can raise price slightly without losing all its customers.

Characteristics of Monopolistic Competition

- A large number of buyers and sellers in a given market act independently.
- There is a limited control of price because of product differentiation.
- Sellers offer differentiated products or similar but not identical products.
- New firms can enter the market easily. However, there is a greater competition in the sense that new firms have to offer better features of their products.
- Economic rivalry centers not only upon price but also upon product variation and product promotion.

Short-run Analysis of Monopolistic Competition



Long-run Analysis of Monopolistic Competition

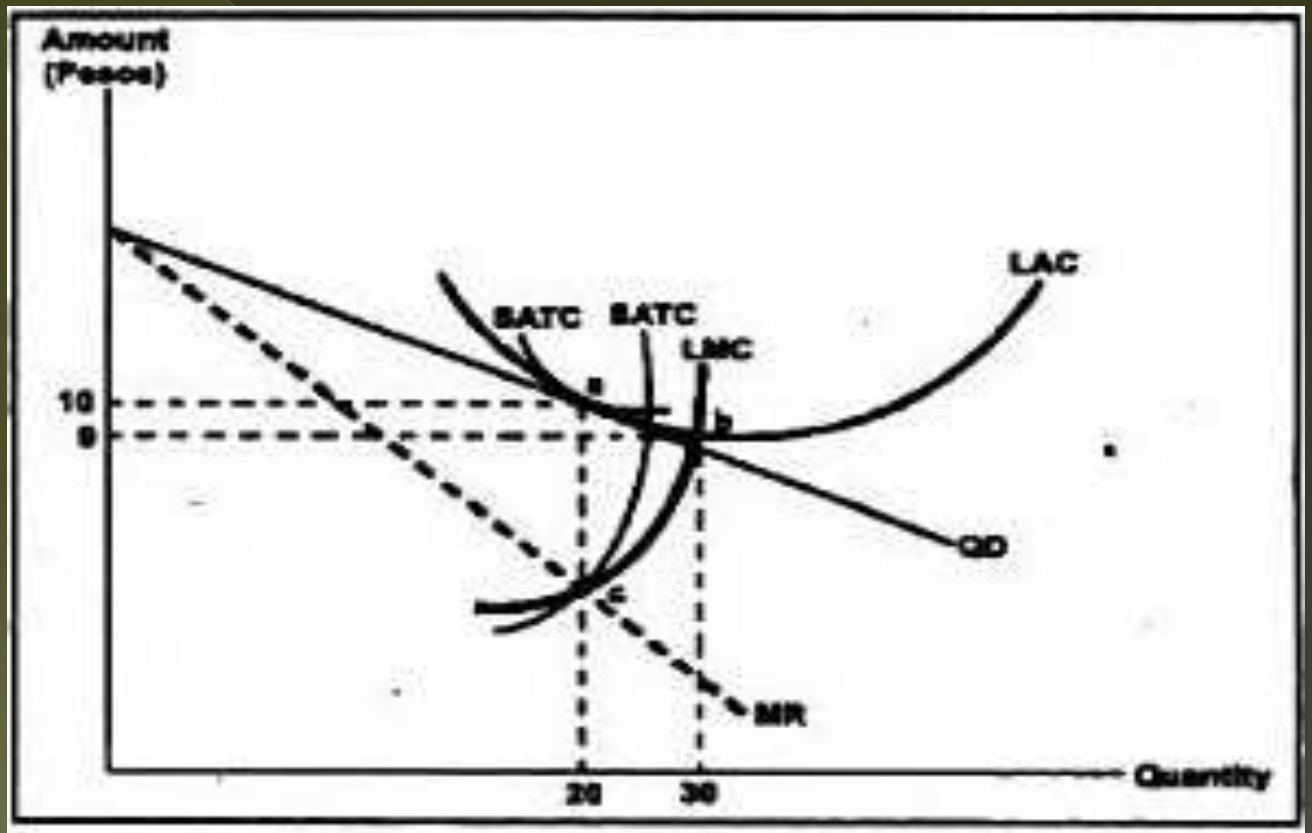


Figure 68
Long-run Analysis of Monopolistic Competition

Monopsony

A market situation in which there is only one buyer of goods and services in the market. It is sometimes considered analogous to monopoly in which there is only one seller of goods and services in the market.

Monopsony power gives them the ability to control their unit cost for an input which is similar to the way the monopoly controls their price.

Oligopsony

A market situation where there are a small number of buyers. This is usually with a small number of firms competing to obtain the factors of production.

Under this market situation, firms are buyers and not sellers. This is sometimes analogous to oligopoly, where there are few sellers.

Summary of Different Market Structure

Market Characteristics	Perfect Competition	Monopolitic Competition	Oligopoly	Monopoly
Product Differentiation (brand name)	No	Yes	Yes, but less so if oligopoly supply raw materials	Yes
Price Competition	Intense: must meet price of other firms	Intense	Occasional but cooperative behavior often present	Occasional with producers of substitute goods and services. Price of natural monopolies is subject to regulation.
Non-price competition (Advertising)	No	Intense	Intense	Often, to promote public good will
Barrier to Entry	No	Low	High	High
Information Cost	No	Low	High	High
Opportunities to earn and keep economic profits	No	Few	Many	Many, though often regulated
Number of sellers	Large number of seller	Numerous buyer and seller	Small number of firm	Only one seller
Degree of control over price	Price taker	Limited control	Has control over price	Price dictator
Type of product	Homogeneous product	Differentiated products or similar but not identical	Differentiated or identical products	Highly standardized

THANK YOU FOR LISTENING!

INTRODUCTION TO MACROECONOMICS

MEANING OF MACRO ECONOMICS

Macro Economics is defined as the branch of Economics which studies activities including economic issues and economic problems at the level of an economy as a whole. It focus on Macroeconomic variables like aggregate demand, aggregate supply, general price level, national income and output etc. The term macro is driven from the greek word 'Makros which means large. Thus macroeconomic means economics of large dimensions, referring to the economy as a whole. Macro economics is concerned with the economy as a whole or large segments of it.

Modern Macro economic theory is the outcome of the whole body of literature that has grown out of the income and employment theory initiated by J.M. Keynes in his General theory of Employment interest and money, published in 1936.

Definitions of Macro Economics

It is the words of Samuel. A. Morley. "Macro economics is the study of key economic magnitudes, such as general price level, income and employment measured over the entire economy"

'According to Prof. Rosalind Levacie "Macro economics is concerned with the determination of the broad aggregates, in the economy such as national product. employment, the general price level and the balance of payments."

Richard G. Lipsey, list out the problems of macro economics as broad areas of macroeconomics:

(i) Problems relating to the determination and fluctuations of level employment and income.

(ii) Problems relating to the determination and changes of level of prices.

(iii) Problems relating to fluctuations in the general level of money wages and real wages.

(iv) Problems relating to the allocation of resources between the production of consumer goods and the production of capital goods.

(v) Problems relating to the rate of growth of production capacity of the economy.

(vi) Problems concerning the relation between international trade and the levels of employment, prices and the level of income in the economy.

NATURE AND SCOPE/IMPORTANCE OF MACRO ECONOMICS

Macro Economics is the study of aggregates or averages covering the entire economy, such as total employment, national income, national output, total investment, total consumption, total savings, aggregate supply, aggregate demand, general price level and wage rate etc. it is aggregative economics which examines the interrelations among the various aggregates, their determination and causes of fluctuations in them.

Prof. Ackley defines Macro Economics as "Macro Economics deals with economic affairs 'in the large, it concerns the overall dimensions of economic life. It looks at the total size and shape and functioning of the elephant of economic experience, rather than working of articulation or dimensions of the individual parts. It studies the character of the forest,independently of the tress which compose it."

Macro Economics is of much theoretical and practical importance in understanding, the problem and policy making in an economy. The scope of the Macro economics means the areas of study under macroeconomics. It means issues or problems or parameters of Economics that are included in the macroeconomics.

The scope and nature of macro economics can be explained in the following points:

1. To Understand the working of the Economy: The study of macro economics analysis is of the paramount importance in getting us an Idea about the functioning of an economic system as a whole. It is essential for proper and accurate knowledge of aggregations, as such a large and complex economic system is impossible in term of numerous individual items, at the micro level

2. Understanding the Economic Policies : Macro Economics is extremely useful from the view point of the fiscal policy, Modern Governments, particularly, the underdeveloped economies are confronted with innumerable national problems. There are the problems of over population, inflation, balance of payments, general under production etc. these policies have emerged as central issues in macro economics.

3. Theory of Employment: Macroeconomics studies problems relating to employment and unemployment in the economy as a whole. It studies the different factors determining the level of employment, viz, affective demand, aggregate supply aggregate demand, aggregate consumptions aggregate investment and aggregate savings etc. which determines the level of employment in the economy.

4. Theory of National Income: The study of macro economics is very significant for evaluating the overall performance of the economy in terms of national income. This led to the construction of the data on national income. National income data help in anticipating the level of economic activity and to comprehend the distribution of income among different groups of people in the economy. It also studies the method of measurement of national income and social accounting.

5. Theory of Economic Growth: The theory of economic growth is also the subject matter of macro economics. Specifically macro economics study the growth problem of underdeveloped economies. Plans for the overall increase in national income, productivity, employment are framed and executed so as to raise the level of Economic growth and development of the economy as a whole.

6. Theory of Money and Monetary Problems: Macro economics also study the monetary problems of the economy. Frequent changes in the value of money, inflation or deflation, affect the economy adversely. They can be counteracted by adopting the suitable monetary, fiscal and direct control measures for the economy as a whole Macroeconomics study the functions of money and theories related to the demand and supply of money in the system. The system of banking and other financial institution is also the subject matter of the macroeconomics

7. Business Cycle: The economic activities always shows ups and down. They never shows a steady pattern of change for all the time to come. This cyclical movement of the is better known as the business cycle is a major macroeconomic issue and on important area of macroeconomic study

8. Understanding the Behaviour of Individual Units: For understanding the performance of individual units, the study of macro economics is imperative Demand for individual products depends upon aggregate demand in the economy. Unless the causes of deficiency in aggregate demand are analyzed it is not feasible to understand fully the grounds for a fall in the demand of

individual products. The reasons for increase in costs of a specific firm or industry cannot be analyzed without knowing the average cost conditions of the whole economy. Thus, the study of individual units is not possible without macro economics.

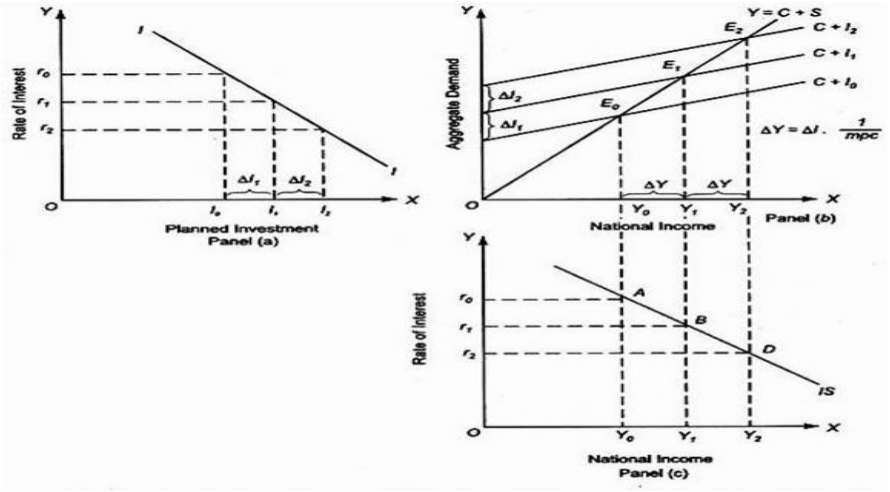
9. Budgetary deficit and Fiscal Policy: In the wake of privatization and globalization of the world economies budgetary deficit and related Fiscal Policy was emerged as a central issue of Macroeconomics.

GOODS MARKET EQUILIBRIUM: DERIVATION OF THE IS CURVE

The IS-LM curve model emphasises the interaction between the goods and money markets. The goods market is in equilibrium when aggregate demand is equal to income. The aggregate demand is determined by consumption demand and investment demand. In the Keynesian model of goods market equilibrium we also now introduce the rate of interest as an important determinant of investment. With this introduction of interest as a determinant of investment, the latter now becomes an endogenous variable in the model. When the rate of interest falls the level of investment increases and vice versa. Thus, changes in the rate of interest affect aggregate demand or aggregate expenditure by causing changes in the investment demand. When the rate of interest falls, it lowers the cost of investment projects and thereby raises the profitability of investment. The businessmen will therefore undertake greater investment at a lower rate of interest. The increase in investment demand will bring about increase in aggregate demand which in turn will raise the equilibrium level of income.

In the derivation of the IS curve we seek to find out the equilibrium level of national income as determined by the equilibrium in goods market by a level of investment determined by a given rate of interest. Thus IS curve relates different equilibrium levels of national income with various rates of interest. With a fall in the rate of interest, the planned investment will increase which will cause an upward shift in aggregate demand function (C + I) resulting in goods market equilibrium at a higher level of national income. The lower the rate of interest, the higher will be the equilibrium level of national income. Thus, the IS curve is the locus of those combinations of rate of interest and the level of national income at which goods market is in equilibrium. How the IS curve is derived is illustrated in Fig. . In panel (a) of Fig., the relationship between rate of interest and planned investment is depicted by the investment demand curve II. It will be seen from panel (a) that at rate of interest Or0the planned investment is equal to OI0. With OI0 as the

amount of planned investment, the aggregate demand curve is C + I0 which, as will be seen in panel (b) of Fig. equals aggregate output at OY0 level of national income. Therefore, in the panel (c) at the bottom of the Fig. , against rate of interest Or0, level of income equal to OY0has been plotted. Now, if the rate of interest falls to Or1, the planned investment by businessmen increases from OI0 to OI1 [see panel (a)]. With this increase in planned investment, the aggregate demand curve shifts upward to the new position C + II in panel (b), and the goods market is in equilibrium at OY1 level of national income. Thus, in panel (c) at the bottom of Fig. the level of national income OY1 is plotted against the rate of interest, Or1. With further lowering of the rate of interest to Or2, the planned investment increases to OI2 [see panel (a)]. With this further rise in planned investment the aggregate demand curve in panel (b) shifts upward to the new position C +I2 corresponding to which goods market is in equilibrium at OY2 level of income. Therefore, in panel (c) the equilibrium income OY2 is shown against the interest rate Or2. By joining points A, B, D representing various interest-income combinations at which goods market is in equilibrium we obtain the IS curve. It will be observed from Fig. that the IS curve is downward sloping (i.e., has a negative slope) which implies that when rate of interest declines, the equilibrium level of national income increases. Why does IS Curve Slope Downward? What accounts for the downward-sloping nature of the IS curve.



As seen above, the decline in the rate of interest brings about an increase in the planned investment expenditure. The increase in investment spending causes the aggregate demand curve to shift upward and therefore leads to the increase in the equilibrium level of national income. Thus, a lower rate of interest is associated with a higher level of national income and vice versa.

This makes the IS curve, which relates the level of income with the rate of interest, to slope downward. Thus, a lower rate of interest is associated with a higher level of national income and vice versa. This makes the IS curve, which relates the level of income with the rate of interest, to slope downward. Steepness of the IS curve depends on: (1) The elasticity of the investment demand curve, and (2) The size of the multiplier. The elasticity of investment demand signifies the degree of responsiveness of investment spending to the changes in the rate of interest. Suppose the investment demand is highly elastic or responsive to the changes in the rate of interest, then a given fall in the rate of interest will cause a large increase in investment demand which in turn will produce a large upward shift in the aggregate demand curve. A large upward shift in the aggregate demand curve will bring about a large expansion in the level of national income. Thus when investment demand is more elastic to the changes in the rate of interest, the investment demand curve will be relatively flat (or less steep).

Similarly, when investment demand is not very sensitive or elastic to the changes in the rate of interest, the IS curve will be relatively more steep. The steepness of the IS curve also depends on the magnitude of the multiplier. The value of multiplier depends on the marginal propensity to consume (mpc). It may be noted that the higher the marginal propensity to consume, the aggregate demand curve (C + I) will be more steep and the magnitude of multiplier will be large. In case of a higher marginal propensity to consume (mpc) and therefore a higher value of multiplier, a given increment in investment demand caused by a given fall in the rate of interest will help to bring about a greater increase in equilibrium level of income. Thus, the higher the value of multiplier, the greater will be the rise in equilibrium income produced by a given fall in the rate of interest and this makes the IS curve flatter.

On the other hand, the smaller the value of multiplier due to lower marginal propensity to consume, the smaller will be the increase in equilibrium level of income following a given increment in investment caused by a given fall in the rate of interest. Thus, in case of smaller size of multiplier the IS curve will be more steep. Shift in IS Curve: It is important to understand what determines the position of the IS curve and what causes shifts in it. It is the level of autonomous expenditure which determines the position of the IS curve and changes in the autonomous expenditure cause a shift in it. By autonomous expenditure we mean the expenditure, be it investment expenditure, the Government spending or consumption

expenditure, which does not depend on the level of income and the rate of interest. The government expenditure is an important type of autonomous expenditure. Note that the Government expenditure, which is determined by several factors as well as by the policies of the Government, does not depend on the level of income and the rate of interest.

Similarly, some consumption expenditure has to be made if individuals have to survive even by borrowing from others or by spending their savings made in the past year. Such consumption expenditure is a sort of autonomous expenditure and changes in it do not depend on the changes in income and rate of interest. Further, autonomous changes in investment can also occur. In the goods market equilibrium of the simple Keynesian model the investment expenditure is treated as autonomous or independent of the level of income and therefore does not vary as the level of income increases. However, in the complete Keynesian model, the investment spending is thought to be determined by the rate of interest along with marginal efficiency of investment. Following this complete Keynesian model, in the derivation of the IS curve we consider the level of investment and changes in it as determined by the rate of interest along with marginal efficiency of capital. However, there can be changes in investment spending autonomous or independent of the changes in rate of interest and the level of income. For instance, growing population requires more investment in house construction, school buildings, roads, etc., which does not depend on changes in level of income or rate of interest. Further, autonomous changes in investment spending can also take place when new innovations come about, that is, when there is progress in technology and new machines, equipment, tools etc. have to be built embodying the new technology.

Besides, Government expenditure is also of autonomous type as it does not depend on income and rate of interest in the economy. As is well known, government increases its expenditure for the purpose of promoting social welfare and accelerating economic growth. Increase in Government expenditure will cause a rightward shift in the IS curve.

MONEY MARKET EQUILIBRIUM: DERIVATION OF THE LM CURVE

The money market is the interaction among institutions through which money is supplied to individuals, firms, and other institutions that demand money. Money market equilibrium occurs at the interest rate at which the quantity of money demanded is equal to the quantity of money supplied.

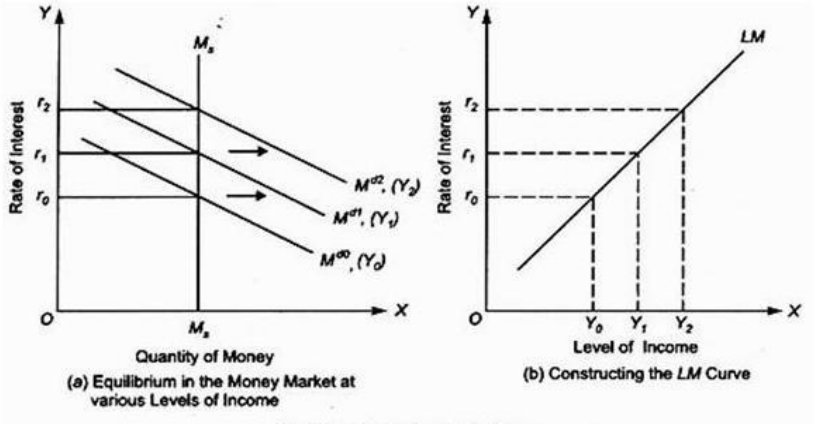
The LM curve can be derived from the Keynesian theory from its analysis of money market equilibrium. According to Keynes, demand for money to hold depends upon transactions motive and speculative motive. It is the money held for transactions motive which is a function of income. The greater the level of income, the greater the amount of money held for transactions motive and therefore higher the level of money demand curve.

The demand for money depends on the level of income because they have to finance their expenditure, that is, their transactions of buying goods and services. The demand for money also depends on the rate of interest which is the cost of holding money. This is because by holding money rather than lending it and buying other financial assets, one has to forgo interest.

Thus demand for money (Md) can be expressed as: Md = L(Y, r) where Md stands for demand for money, Y for real income and r for rate of interest.

Thus, we can draw a family of money demand curves at various levels of income. Now, the intersection of these various money demand curves corresponding to different income levels with the supply curve of money fixed by the monetary authority would gives us the LM curve.

The LM curve relates the level of income with the rate of interest which is determined by money-market equilibrium corresponding to different levels of demand for money. The LM curve tells what the various rates of interest will be (given the quantity of money and the family of demand curves for money) at different levels of income. But the money demand curve or what Keynes calls the liquidity preference curve alone rises. In Fig. (b) we measure income on the X- axis and plot the income level corresponding to the various interest rates determined at those income levels through money market equilibrium by the equality of demand for and the supply of money in Fig. (a).



Slope of LM Curve:

It will be noticed from Fig. (b) that the LM curve slopes upward to the right. This is because with higher levels of income, demand curve for money (Md) is higher and consequently the money- market equilibrium, that is, the equality of the given money supply with money demand curve occurs at a higher rate of interest. This implies that rate of interest varies directly with income. It is important to know the factors on which the slope of the LM curve depends. There are two factors on which the slope of the LM curve depends. First, the responsiveness of demand for money (i.e., liquidity preference) to the changes in income.

As the income increases, say from Y0 to Y1, the demand curve for money shifts from Md 0 to Md 1, that is, with an increase in income, demand for money would increase for being held for transactions motive, Md or L1 =f(Y). This extra demand for money would disturb the money market equilibrium and for the equilibrium to be restored the rate of interest will rise to the level where the given money supply curve intersects the new demand curve corresponding to the higher income level. It is worth noting that in the new equilibrium position, with the given stock of money supply, money held under the transactions motive will increase whereas the money held for speculative motive will decline. The greater the extent to which demand for money for transactions motive increases with the increase in income, the greater the decline in the supply of money available for speculative motive and, given the demand for money for speculative motive, the higher the rise in the rate of interest and consequently the steeper the LM curve, r = f (M2,

L2) where r is the rate of interest, M2 is the stock of money available for speculative motive and L2 is the money demand or liquidity preference function for speculative motive.

The second factor which determines the slope of the LM curve is the elasticity or responsiveness of demand for money (i.e., liquidity preference for speculative motive) to the changes in rate of interest. The lower the elasticity of liquidity preference for speculative motive with respect to the changes in the rate of interest, the steeper will be the LM curve. On the other hand, if the elasticity of liquidity preference (money demand function) to the changes in the rate of interest is high, the LM curve will be flatter or less steep. Shifts in the LM Curve: Another important thing to know about the IS-LM curve model is that what brings about shifts in the LM curve or, in other words, what determines the position of the LM curve. A LM curve is drawn by keeping the stock or money supply fixed. Therefore, when the money supply increases, given the money demand function, it will lower the rate of interest at the given level of income. This is because with income fixed, the rate of interest must fall so that demand for money for speculative and transactions motive rises to become equal to the greater money supply. This will cause the LM curve to shift outward to the right. The other factor which causes a shift in the LM curve is the change in liquidity preference (money demand function) for a given level of income. If the liquidity preference function for a given level of income shifts upward, this, given the stock of money, will lead to the rise in the rate of interest for a given level of income. This will bring about a shift in the LM curve to the left. It therefore follows from above that increase in the money demand function causes the LM curve to shift to the left. Similarly, on the contrary, if the money demand function for a given level of income declines, it will lower the rate of interest for a given level of income and will therefore shift the LM curve to the right.

Essential Features : From our analysis of the LM curve, we arrive at its following essential features:

1. The LM curve is a schedule that describes the combinations of rate of interest and level of income at which money market is in equilibrium.

2. The LM curve slopes upward to the right.

3. The LM curve is flatter if the interest elasticity of demand for money is high. On the contrary, the LM curve is steep if the interest elasticity demand for money is low.

4. The LM curve shifts to the right when the stock of money supply is increased and it shifts to the left if the stock of money supply is reduced.

5. The LM curve shifts to the left if there is an increase in the money demand function which raises the quantity of money demanded at the given interest rate and income level. On the other hand, the LM curve shifts to the right if there is a decrease in the money demand function which lowers the amount of money demanded at given levels of interest rate and income.

DIFFERENCE BETWEEN MICRO AND MACRO ECONOMICS

The main differences between micro-economics and macro-economics can be explained with the help of the following points:

1. Difference in the Degree of Aggregation. Microeconomics differs from macroeconomics due to the difference of the degree of aggregation of economic elements. Macroeconomics studies the individual units of the economy like a firm on the contrary, macroeconomics deals with aggregates like national income and aggregate savings. It studies the problems of the economy as a whole.

2. Difference in Objectives. The objective of microeconomics is to study the principles, problems and policies concerning the optimum allocation of resources; on the contrary, macroeconomics studies the problems, policies and principles relating full employment of resources and growth of resources. In this way, both types of economic analysis differ from each other as they have different objectives.

3. Difference of Subject Matter. The subject matter of microeconomics deals with the determination of price, consumer's equilibrium; distribution and welfare, etc, On the other side, the subject matter of macroeconomics is full employment, national income, general price-level, trade cycles, economy growth, etc.

4. Method of Study. Another difference between the two types of economic analysis is regarding their methods of study. Laws of micro-economics are formulated by taking some assumptions. With the help of these assumptions, micro laws establish relationship between the causes and effects of economic phenomena. For example, the law of demand shows the inverse relationship between price and demand. But the law of applies only when its assumptions hold

good. These assumptions are: constant prices of other goods, no change in fashion, habit arid custom, etc. In this law, the effect of change in the prices of other goods is not taken into consideration. This method of study is known as "partial equilibrium analysis.

In macroeconomics, economic elements are categorized into aggregate units like aggregate demand, aggregate supply, total consumption, total investment, etc. The interdependence of these economic factors is also studied in macroeconomics. In other words, the total effect of an economic factor on the economy is taken into account in macro analysis. This method of study is called general equilibrium analysis'.

5. Macroeconomic Paradoxes. There are some economists like Prof. Boulding and Samuelson who pointed out the risks of the distinction between the two types of analysis. The set of errors arising in this distinction is known as 'macro economic paradoxes' or 'the fallacy of aggregation. It means that the act which is beneficial for an individual may disturb the working of the economy as a whole. In other words, the prescriptions which are virtues for individuals. become vices for the economy if applied. For example, if an individual saves, his family will be benefited. But if the whole society starts saving, it will reduce - consumption demand supply income, etc. In this way, higher saving by the people finally reduces the income of the people. The reason is that one man's expenditure is another man's income. If one person does not spend, he reduces the income of some other person. In this way, we have seen that micro decisions do not hold true for the economy as a whole. Such a macro paradox causes differences between micro and macroeconomic policy.

6. Different Assumptions. The two types of economic analysis are based upon different assumptions. Micro economics states its laws by assuming full employment, constant production and income. On the basis of these assumptions, microeconomics analyses how production and factors of production are allocated or distributed among different uses. On the contrary, macro-economics assumes how the factors of production are distributed. On the basis of the assumption of factor distribution, it explains how full employment can be achieved. In this way, both micro- and macroeconomics state their laws by taking different assumptions. So they differ from each other..

7. Difference of the Farces of Equilibrium. Microeconomics studies the equilibrium between the forces of individual demand and supply or market demand and supply. But macroeconomic

analysis deals with the equilibrium between the forces of demand and supply of the whole economy. Aggregate demand and supply of the economy are estimated in terms of money. So the aggregate demand and supply are related to the total income.

8. Mortal and Immortal Subjects. Microeconomics deals with individuals. And individuals are mortal. Man dies after passing some lifetime in the world. Therefore, the tool of microeconomics, i.e., man is mortal. On the contrary, macroeconomics is concerned with the aggregates. It studies the problems of the whole economy. The tool of its study is society. Society never ends. Men may come and men may go but the society remains forever. So macroeconomics studies the immortal society. This is another difference between the two.

LIMITATIONS OF MACROECONOMIC THEORY

Though macroeconomic theory is useful for various reasons, it also suffers from certain limitations. The limitations can be pointed out as below: Firstly, in macroeconomic theory we deal with aggregates and these aggregate entities are generally taken as homogeneous entities. But this is not true. If we look at the internal composition and structure of the aggregates we find that they are made up of heterogeneous elements. For example, when we take the concept of rate of interest we assume that there exists only one rate of interest throughout the economy. But this is not true. In practice there exist different rates of interest for different types of loans. We actually take the average rate of interest. But the average does not show the dispersion or variability of rates of interest.

Secondly, all aggregates are not useful. Only those aggregates which can be functionally related happen to be useful for the purpose of study.

Thirdly, in macroeconomic theory we formulate a model of the economy and discuss the functioning of the economy with the help of this model. The model is a theoretical construct which is based on a number of assumptions some of which are not realistic. Accordingly there exists a wide gap between the theoretical model and the reality. In many cases reality cannot be explained with the help of the model because the unrealistic nature of the assumptions.

Fourthly, the major part of the macroeconomic theory developed on the basis of the path-breaking works of Lord Keynes is applicable for a developed capitalist economy. It is not suitable for developing or underdeveloped economies Problems of developing countries are

different from those of developed countries. Hence the models built for developed countries cannot be suitable for the developing countries.

Fifthly, many proposition which are true for individual's on the basis of ceteris and paribus assumption are true for economy as a whole. The behaviour of an aggregate at the Macro Level cannot always be obtained from the generalization of the behaviour of the micro unit.

UNIT -2

NATIONAL INCOME ACCOUNTING

MEANING OF NATIONAL INCOME

By National Income we refers to the money value of all final goods and services produced by the normal residents of a country during on accounting year or National is some total of factor income earned by the normal resident of a country during the period of one year.

Two things need special focus from the above definitions of national income viz (a) final good and services and (b) normal residents of a country.

(a) By final value of goods and services mean only the final goods which have crossed the boundary line of production and are ready for use by their final users, are included in the estimation of National income. The intermediate goods which are still within the boundary line of the production and are purchased by one firm from another either for resale or for use as raw material do not constitute final goods.

The example of final goods, Bread and butter as used by the consumers and Tractors and harvastors, used by the farmers.

The example of intermediate goods are like a shirt purchased by firm X from firm Y for resale like and wood purchased by a carpenter (From a Timber merchant) for making chair are intermediate goods.

(b) Normal resident is said to a person or institutions who ordinarily resides in a country and whose centre of economic interest lies in that country. Normal resident, of a country includes citizen and institution of country who normally resides in that country and the citizen of other counties or nations who continue to live in a country beyond a period of one year and also the citizen of our country working in the rest of world in the international organization located our country. Contrary the foreigners who visit for traveling recreation. holidays medical treatment, studies conference etc are not consider as normal residents a country while estimating the national income.

Definitions of National Income

(1) According to Marshall, "The labour and capital of a country, acting upon its natural resources, produce annually a certain net aggregate of commodities, material and immaterial, including services of all kinds. The limiting word "net" is needed to provide for using up of raw and half-finished commodities and for the wearing out and depreciation of plant which is involved in production; all such waste must, of course, be deducted from the gross produce before the true or net income can be found. And net income due on account of foreign investments must be added in. This is the true net annual income or revenue of the country, or the national dividend."

(2) In the words of A.C. Pigou, "The national dividend is that part of the objective income of the community including, of course, income derived from abroad, which can be measured in money."

(3) In the words of Prof. J.R. Hicks, "The national income consist of a collection of goods and services reduced to a common basis by being measured in terms of money"

(4) According to Irring Fisher, "The National or the devident consists solely of services as received by the ultimate consumer whether from their material or human environments. This a paino or over coat of this year is not the part of this year's income but on addition to the capital. Only his services rendered to me during this year by these things are income. Fishers definition is considered to be better the Marshall's and Pigou's definitions because Fisher provides on adequate concept of Economics Welfare which is dependent on consumption and consumption respondents one standard of living.

CONCEPTS OF GDP AND OTHERS ASSOCIATED WITH NATIONAL INCOME

1 Gross Domestic Product at Market Price (GDPmp)

2 Gross National Product at Market Price (GNPmp)

3. Net National Product at Market Price (MNPmp)

4. Net Domestic Product at Market Price (NDPmp)

5. Net Domestic Product at Factor Cost (NDPfc)

6. Gross Domestic Product at Factor Cost (GDPfc)

7. Net National Product at Factor Cost (NNPfc)

8. Gross National Product at Factor Cost (GNPfc)

9. National Disposable Income: Gross and Net Concepts

10. Factor Income from Net Domestic Product accruing to Private Sector

11. Private Income

12. Personal Income

13 Personal Disposable Income

Following is a brief description of these concepts / associates of National income

1. Gross Domestic Product at Market Price (GDPmp): Gross domestic product is the market value of the final goods and services produced within the domestic territory of a country during one year inclusive of depreciation. There are both resident as well as foreign producers within the domestic territory of a country. Gross domestic product includes the market value of the final goods and services produced by all such producers. The provision of depreciation is the part of the gross domestic product at Market Price or GDPmp.

2. Gross National Product at Market Price (GNPm):

Gross national product is not a domestic concept, it is a national concept. Here, we are to estimate national product of all the normal residents of a country, no matter in which part of the world they are. We are to be no longer confined to the domestic territory of a country. Also, we are not account for the product of non-resident firms in our domestic territory. Thus, gross national product is the market value of the final goods and services produced by normal residents of a country during the period of an accounting year.

GDPmp becomes GNPmp if net factors income from abroad is added to it.

Thus,

GDPmp+Net factors income from abroad = GNPmp

Net factor income from abroad is the difference between factor income (rent, interest, profit and wages) earned by our residents from rest of the world and factor income earned by non-residents within our country..

The, net factor income from abroad may be positive or negative.

If net factor income from abroad is positive, gross national product would be greater than gross domestic product. On the other hand, if net factor income from abroad is negative, gross national product would be less than the gross domestic product.

3. Net National Product at Market Price (NNP_{mp}): Net national product at market price measures the value of final goods and services produced by the normal residents of a country in an accounting year, after allowing for depreciation losses. We know, some capital goods are used up in the production process through normal wear and tear, obsolescence and accidental destruction live accidental or sudden break down of the machinery be deducted from GNPmp to arrives MNPmp. The cost to replace these capital goods is called depreciation or consumption of fixed capital.

NNPmp is estimated as the difference between GNPmp and depreciation..

Hence. GNPmp-Depreciation = NNPmp

4. Net Domestic Product at Market Price (NDPmp): Net domestic product at market price is the market value of the final goods and services produced within the domestic territory of a country, exclusive of depreciation or the consumption of fixed capital.

NDPmp is estimated as the difference between GDPmp and depreciation.

NDPmp =GDPmp-Depreciation

5. Net Domestic Income or Net Domestic Product at Factor Cost (NDPfc): Net domestic income is the sum total of factor income generated within the domestic territory of a country during an accounting year. It is briefly called 'domestic income'. It is equal to net domestic product at factor cost. Thus, domestic income- NDPfc

NDPfc differs from NDPmp as in the following equation :

NDPfc=NDPmp-Indirect taxes + Subsidies

Or

NDPfc=NDPmp-Net Indirect Taxes (NIT)

(NIT-Indirect taxes- Subsidies)

6. Gross Domes tic Product at Factor Cost (GDPfc): Gross domestic product at factor cost is estimated as sum of the net value added by different producing units and the consumption of fixed capital. Since the net value added get distributed as income to the owners of factors of production, we can estimate GDPfc as sum of the domestic factor incomes and consumption of the fixed capital. Hence,

NDPfc+ Depreciation =GDPfc

7. Net National Product at Factor Cost (NNPfc) or National Income fixed capital consumption: Any 'domestic' concept becomes a 'national' concept if 'net factor income from abroad' is added. Accordingly, if 'net factor income from abroad' is added to NDPfc, it becomes NNPfc. Thus,

NDPfc+ Net Factor Income from Abroad = NNPfc

8. Gross National Product at Factor Cost (GNPfc): The Gross national product at factor cost is defined as sum total of the gross domestic product and net factor income from abroad i.e. income earned by normal residents of our country minus the incomes earned by foreign residents from one country.

NNPfc becomes GNPfc if depreciation is added to NNPfc . Thus,

GNPfc= NNPfc + Depreciation

Obviously,

GNPfc-Depreciation = NNPfc

9. National Disposable Income: National disposable income refers to the net income at market price available to a country for disposal. It is the sum total of national income (NNPfc), net indirect taxes and net current transfer from the rest of the world.

National Disposable Income =National Income + Net Indirect Taxes + Net Current Transfers from the Rest of the World Gross and Net Concepts of National Disposable Income

10. Private Income : Private income is the income of the private sector obtained from any source, productive or otherwise, and the retained income of the corporations.

Private income includes both factor income as well as transfer income. In order to obtain private income from national income, we add (i) Current transfer earnings from the government, (ii) Interest on national debt (iii) Net current transfers from the rest of the world, and deduct from national income, (i) Property and entrepreneurial income of the government departmental enterprises, (ii) Saving of non-departmental undertakings.

11. Personal Income: Personal income is the total of all current income received by households from all sources. It is, in fact, the sum total of all types of factor income actually received by the households and current transfers. Personal income includes the income actually received by the households. Some part of the profits is retained by the firms as undistributed profits, also called corporate saving. Also, some part of the profits is taxed by the government, called corporate profit tax. The principal difference between private income and personal income, therefore, is that while private income includes corporate saving and corporate tax, while personal income does not. Both these components (corporate savings and corporate tax) are not received by the households. Accordingly, these are deducted from private income to find out private personal income.

12. Personal Disposable Income: Personal disposable income is that part of personal income which the households can use the way they like. It is either spent or saved. It is calculated by deducting direct taxes and miscellaneous fees, fines, etc., paid by the individuals from their income.

LIMITATIONS OF GDP

There are many limitations to using GDP as a way to measure current income and production. Major ones as follows.

1. Changes in quality and the inclusion of new goods - higher quality and/or new products often replace older products. Many products, such as cars and medical devices, are of higher

quality and offer better features than what was available previously. Many consumer electronics, such as cell phones and DVD players, did not exist until recently.

2. **Leisure human costs-** GDP does not take into account leisure time, nor is consideration given to how hard people work to produce output. Also, jobs are now safer and less physically strenuous than they were in the past. Because GDP does not take these factors into account, changes in real income could not be understated.

3. **Underground economy -** Barter and cash transactions that take place outside of recorded marketplaces are referred to as the underground economy and are not included in GDP statistics. These activities are sometimes legal ones that are undertaken so as to avoid taxes and sometimes they are outright illegal acts, such as trafficking in illegal drugs.

4 Harmful Side Effects - Economic "bads", such as pollution, are not included in GDP statistics. While no subtractions to GDP are made for their harmful effects, market transactions made in an effort to correct the bad effects are added to GDP.

5. Non-Market Production - Goods and services produced but not exchanged for money, known as "nonmarket production", are not measured, even though they have value. For instance, if you grow your own food, the value of that food will not be included in GDP. If you decide to watch TV instead of growing your own food and now have to purchase it, then the value of your food will be included in GDP.

MEASUREMENT OF NATIONAL INCOME

There are mainly three methods of measuring national income because national income can be estimated at, from three different aspects as total output, total income total expenditure. All these three are flows in the economy per period of time. They are three names for the same thing which is the aggregate output. As Cairncross has written, "The national income can be looked at in any one of the three ways as the national income measured by adding up everybody's output....; as the national outlay measured by adding up the value of all the things that people buy and adding in their saving."

Since the volume of flows in a particular period of time must equal, we can closely define a fundamental accounting identity which applies in a hypothetical economy in a particular period. It is

National Income+ Depreciation = Gross National Product = Expenditure on Gross National product

It is clear from this fundamental identity that the measure of national income must give us the same result whichever the way we adopt. We explain the three methods of measuring national income below. The three methods measure the same flow. When production takes places, factors of production are paid. There is an income flow and an output flow. Output is purchased by people through expenditures which give rise to income. Thus income, out put and expenditure are the three facets of the same coin.

PRODUCT METHOD OR VALUE ADDED METHOD

Product Method or Value Added Method is that Method, which measures the national income by estimating the contribution of each producing enterprise to production in the domestic territory of the country in an accounting year this method is also called as the industrial origin method or net output method. The entire output of final goods and services is multiplied by their respective market prices to find out the gross national product. The gross national product may be arrived at by adding up the values imparted to the intermediate goods and services during different process of production. Whether we employ the final products method or the 'value added' method, the total money-value of the gross national product would be the same. From the gross national product so estimated, we have to deduct the gross depreciation of equipment and machinery involved in the process of production to arrive at the country's national income.

Value-added method measures the contribution of each producing enterprise in the domestic territory of the country. This method involves the following steps: (a) Identifying the producing enterprise and classifying them into wise sectors according to their activities, (b) estimating net value added by each producing enterprise as well as each industrial sector and adding up the net value added by all the sectors.

Precautions regarding Product Method

Following precautions must be taken into account while using the products method:

(1) Value of the sale and purchase of second hand goods is not included in value added.

(2) Commission earned on account of the sale and purchase of second hand goods is included in the estimation of value added.

(3) Own account production of goods of the producing units is taken into account. while estimating value added.

(4) Value of intermediate goods is not included in the estimation of value added.

(5) Imputed value of production for self-consumption is taken into account.

(6) Imputed rent on the owner occupied house is also taken into account.

(7) Services for self-consumption is not considered while estimating value added.

INCOME METHOD

According to this method, the incomes accruing to all the factors of production during the process of production are aggregated together to arrive at the national income of the country.

Income method: classification of factor income:

The factor income seen broadly classified as under :

(i) Compensation of employees: It includes (a) wages & salaries in cash (b) payment in kind (c) employees contribution to the social security scheme (d) pension on retirement.

(ii) Operating surplus : It refer to as income from property and entrepreneurship as (a) Rent (b) Interest (c) profit is further divided into Dividends Corporate profit tax and undistributed profit.

(iii) Mixed income. Mixed income refers to the income of the self employed person, using the own labour, labour land capital and entrepreneurship to produce goods and services in the economy.

This is known as national income at factor cost. As is well known, the various factors of production are paid remuneration for their services rendered by them in production. These payments are known as factor payments. They represent the costs to the producers. But for the owners of the factors of production, they constitute factor-incomes which have to be aggregated to estimate the national income of the country. Thus according to this method, the national product is obtained by adding up the factor-incomes accruing to the concerned factors during the process of production. Sum of the factors income generated within the domestic territory of a country is called NDPfc simply domestic income, National from it is found by adding not factor income from abroad to NDPfc. As NDPfc+ Net factor income from abroad

Precautions while using Income Method

The following precautions are to be taken while income method:

(1) Transfer earnings like old age pensions, unemployment allowances, scholarships, pocket expenses, etc. should not be included in national income. (2) Income from illegal activities like smuggling, theft, gambling, etc. should not be included in national income.

(3) Sale proceeds of second hand goods like second hand car, second hand house,second hand TV sets are not included in national income. (4) The sale proceeds of shares and bonds are not included in national income.

(5) Windfall gains, like lotteries and capital gains should not be included as there is no value addition corresponding to windfall gains.

(6) Imputed rent of owner occupied houses is included in national income.

(7) Imputed value of production of goods for self-consumption should be included but value of self-consumed services should not be included.

(8) Indirect taxes like sales tax, excise duty, etc. tend to increase the market price of goods and services. These are included in the estimation of national income at market price but are not to be included while estimating national income at factor cost.

(9) Corporate tax, dividends and undistributed profits are all the components of corporate profits. Once profit is included in the estimation of national income, any of these components should not be separately added, separately .

(10) Income tax is paid out of compensation of employees. It should not be added separately added in the estimation of national income.

EXPENDITURE METHOD

Expenditure is equal to gross domestic product at the market price (GDPMP) this is also called as income disposal method or consumption and investment method. Labour gets wages, land gets rent, capital gets interest and entrepreneur gets profit. The factor incomes of all the owners of factors of production form the subject-matter of cultivation of national income by expenditure method.

The final expenditure is broadly classified into the following four categories (1) consumer final expenditure (c) (ii) Govt. final expenditure (G) (iii) Investment expenditure (I)) and (iv) Net export (X-M)

Private final expenditure (C) refers to the expenditure on final goods and services by the consumers, households, and non-profit making institutions, serving society (live Help age) it includes:

Precautions while using Expenditure Method

The following precautions are to be taken while using expenditure method:

(1) Final Expenditure is to be taken into account to avoid error of double counting.

(2) The intermediate expenditure is not included in the calculation of national income.

(3) Expenditure on second hand goods is not included.

(4) Expenditure on shares and bonds is not included in total expenditure, as these are mere paper claims and are not related to the flow of final goods and services. Such expenditures do not cause any value addition.

(5) Expenditure on transfer payments by the government is not included in total expenditure, eg old age pension, scholarship, etc. Because transfer payments do not cause any value addition in the economy.

Conclusion

In view of the above we may say that the three methods of estimating the national income given above need different types of approaches to calculate the national income Product method requires a census of manufactures and agricultural output. Income method can use personal taxes data and the financial statements of different, enterprises Expenditure method requires extensive family-budget data. In developed economies such data are easily collected. Some countries, therefore, use all the three methods and obtain national income estimates consistent with one another

PRACTICAL AND CONCEPTUAL DIFFICULTIES IN MEASUREMENT BY NATIONAL INCOME

Although all methods are used almost in all countries of the world to calculate national income, yet the national income calculation is a complex affair and is beset with the following difficulties.

1. Difficulty of Defining the Nation. The first and foremost difficulty in the way of measuring National Income is the defining of nations in National Income. There is the difficulty of defining 'nation' in national income. National income doesn't only included income produced within the country, but also income earned in other countries, by way of shipping charges, interest insurance and banking, minus any payments made to foreign countries. Therefore, the definition of nation goes beyond the political boundaries

2. Non-Marketed Services. Another Important difficulty in the measurement of National income is that which kind of goods and services included in the National Income? Commodities and services having money value are included in the national income but there are numbers of goods and services which may not have corresponding flow of money payments. Services performed for love, kindness and mercy and not for money have an economic value but have no money value. The difficulty is whether these services should be included in national income and how to measure their money value. For example, a paid maid servants services are included in the national income but later when she marries the master, she is not paid any more, through she continues to perform the same services. There is, thus, a reduction in the national income.

3. Choice of Method. There are different methods of measuring National Income. It becomes difficult for the investigator/statistician which method to be used in the estimation of national income. It is, however, preferred to use all methods simultaneously depending upon the availability of data or statistics.

4. There is Little of Occupational Specialization. Another difficulty in the way of measuring national Income is that there is little of occupational specialization on the part of the people in underdeveloped countries and developing nation. Most of people take up more than one activity at a time to earn their livelihood. It becomes difficult to collect information about their incomes, etc. For example, the small farmers in India not only do farming, but also engaged themselves in other works to the industrial cities during. The slack season to supplement their meagre earnings from agriculture.

5. Which Stage to Choose. Regarding the stage of economic activity at which national income be calculated, it is agreed that any stage of economic activities line production, consumption and distribution may be adopted depending upon the function of the national income estimate is expected to discharge. If the aim is to show the economic progress and power of the economy, then the production stage would be more suitable, if the aim is to measure the welfare of individuals, then consumption stage would be more useful.

6. Double Counting. Another difficulty is of double counting usually associated with the inventory method. Double counting implies the possibility of a commodity like raw material or labour being included in national income more than once, e.g., a farmer sells wheat worth rupees one hundred to a mill-owner. The mill owner' further sells the wheat flour to a wholesale dealer, who further sells it to a retailer and who in turn sells it to consumer, if we calculate it at every stage, its money value will increase the eight hundred rupees but actually the increase in national income has been to the extent of two hundred rupees only. The best way to avoid this difficulty is to calculate only the value of allgoods and service that entered into final consumptions.

7.Transfer Payment. Transfer Payment is another difficulty in calculating the National Income. Individual gets pension, scholarship, unemployment allowance and interest on public loans, but whether these should be included in national income is a difficult problem to avoid this difficulty these payments needs to be deducted from national income.

8. Price Changes. Another difficulty in calculating national income is the price changes. When the price level in the country rises the national income also shows an increase even though the production might have fallen. On the other hand, with a fall in price level, the national income shows decline even though the production might have gone up. Thus, due to price changes the national income cannot be adequately measured.

9. Self-Consumed, Barte red Production Self-consumed and bartered production is also one of the important difficulty in the measurement of national income. A substantial part of the produce is not brought to the market to be exchanged with the measuring rod of money. It is either consumed directly by the producers or is exchanged for other goods and services. Only rough estimates are made about the part of the produce. This difficulty is mostly in rural areas in agricultural sector of the economy.

10. No Systematic Accounts. Majority of the producers do not keep any accounts of their produce because most of them are illiterate. They mostly produce for self-consumption, not for the market. Thus, the national income estimates are based only on guess work.

11. Inadequate and Unreliable Data. Another important difficulty in the way of calculating National Income is the Inadequate and Unreliable data. The available statistics in these countries are not only inadequate but also torreliable. For example, statistics pertaining to agriculture in India are not complete. We have no reliable estimates of production costs in Indian. agriculture. There are no statistics worth the name for small-scale and medium industries.

12. The Existence of A Large Non-monetized Sector. The another important difficulty in the calculating of National Income is the existence of a large non monetized sector in underdeveloped countries which makes the computation of national income difficult. A substantial part of the agricultural output in these countries does not reach the market at all. Either it is consumed at home by the agriculturists themselves or is exchanged for other goods and services in the village. This presents several difficulties in the calculation of income.

13. Illiteracy and Ignorance . The majority of the small producers in the underdeveloped countries are illiterate and ignorant, and are not in a position to keep any account of their productive activities. So they cannot give to the investigator information about the quantity or

value of their output. Inevitably. an element of guesswork enters into the assessment of income or output in large sectors of the economy.

USES OR IMPORTANCE OF NATIONAL INCOME

National Income is of great importance for the economy of a country. In these days the National Income data are regarded as the accounts of the economy. The importance of national income can be explained by the following points:

(1) Estimation of National Income. National income accounting helps to show. the level of production in the economy and the level of income of the people in the countr y.

(2) Structure of the Economy. National income accounting gives us the knowledge about the structure of the economy. We come to know how different sectors of the economy are interdependent and performing.

(3) Relative Significance of the Production Sectors. The estimation of national income gives us the knowledge about the relative significance of the production sectors of the economy, Production sectors of the economy include primary, secondary and tertiary sectors. National income accounting offers techniques of estimating output across these sectors. Accordingly, relative significance of these sectors is studied as contributor in the national income.

(4) Factoral Distribution of Income . National income accounting gives us the knowledge about the distribution of national income in terms of rent, interest, profit and wages to owners of factors of production. It also facilitate to show. the relative significance of the factors of production in the economy.

(5) Inter-regional and International Comparison. Another importance of national income accounting is that it facilitates a comparison across different regions of a country and across different countries of the world.

(6) Formulation of Policie s. With the help of Estimation of national income we can formulate the policies for the economic growth and economic development of the country: Govt. on the basis of national income data framed several economics problems for the smooth functioning and progress of the economy is a whole.

(7) Economic Planning. For economic planning, the national income accounting is of great significance. For economic planning, it is very important that the data pertaining to a country's gross income, output, saving, consumption from different sources should be available. Without these economic planning is impossible.

(8) Research Scholars of Economie s. The national income accounting is very useful for the research scholars of economics. The research scholars of economics make use of the various data of the country's input, output, income, saving, consumption, investment, employment etc., which are obtained from social accounts for their research purposes.

(9) Indicator of Economic Progress . Another great importance of national income accounting is that it is an indicator of economic progress. The economic welfare of the country is directly with the increase in its national income. Hence, national income presents clear economic picture of the economy.

(10) Distribution of National Income. Distribution of national income is also one of the importance of national income accounting. National income data help 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.

(11) Inflationary and Deflationary Gaps. With the help of national income accounting we are in a position to get a idea about the inflationary and deflationary gaps. Hence, for accurate and deflationary policies, we need regular estimates of national income.

(12) Budgetary Policies. With the help of the national income accounting we can formulate the budgetary policies. Modern governments try to prepare their budgets within the frame work of national income data.

(13) National Expenditure. With help of national income accounting we can get an idea how national expenditure is divided between consumption expenditure and investment expenditure

(14) Standard of Living. With the help of national income accounting we can compare the standards of living of people in different countries and of people living in the same country at different times.

(15) International Sphere . National income studies are very important in the international sphere. These estimates help us to fix the burden of international payments equitable amongst different nations. These are also enable us to determine the subscriptions and quotas of international organization like U.N.O., I.M.F., I.B.R.D. etc.

(16) Defence and Development. National income accounting gives us the knowledge to divide the national product between defence and development purposes. With the help of these estimates we can easily know how much can be spared for war by the civilian population.

(17) Public Sector. With the help of national income accounting we can get an idea about the relative roles of public and private sectors in the economy.

NOMINAL GNP AND REAL GNP (INCOME)

Difference Between Nominal GNP and Real GNP.

Gross Domestic Product or GDP refers to the economic value of goods and services produced within the nation's boundaries, in a particular financial year plus income earned by foreign residents locally less income earned abroad by country's residents. When the GNP is estimated at current prices, it exhibits Nominal GNP, whereas when Real GNP is measured at constant prices or with the price of base year it is called as real GNP

Both Nominal and real GNP are considered as a financial metric for evaluating country's economic growth and development However, the confusion still exists that which one is better indicates the country's progress.

The basic differences between Nominal and Real GNP are discussed as under.

1. Nominal Gross National Product refers to the monetary value of all goods and services produced during the year, within the geographical limits of the country. The economic worth of all goods and services produced in a given year, adjusted as per changes in the general price level is known as Real Gross National Product

2. Nominal GNP is the GNP without the effects of inflation or deflation whereas you can arrive at Real GNP, only after giving effects of inflation or deflation.

3. Nominal GNP reflects current GNP at current prices. Conversely, Real GNP reflects current GNP at past (base) year prices.

4. The value of nominal GNP is greater than the value of real GNP because while calculating it, the figure of inflation is deducted from the total GNP.

5. With the help of Nominal GNP, you can make comparisons between different quarters of the same financial year. Unlike Real GNP, in which comparison of various financial years can be made easily because by removing the figure of inflation, the comparison is made only between the outputs produced.

6. Real GNP shows the actual picture of the economic growth of the country, which is not with the case of Nominal GNP.

Conclusion

These two exhibits the country's financial soundness, whereby Real GNP is given preference over Nominal GNP, it makes the comparison easy for between different financial years. On the other end, Nominal GNP provides a better perspective for comparing different economies at current price level.

UNIT - 3

THEORY OF NATIONAL INCOME DETERMINATION- CLASSICAL AND KEYNESIAN

SAY'S LAW OF MARKET

Say's Law of market lies at the centre of the classical notion of full employment J.B. Say, a French economist of the 19th century, introduced a theory of markets, according to which "supply creates its own demand."

In a barter economy, Say's Law simply holds good that supply creates its own demand, because goods will be produced either for self consumption or for the direct exchange to get something else. This is merely a tautology. The neo-classicists, however considered that Say's Law had wider application in a monetary economy. In a monetary economy, the money costs of the goods produced by the firms are actually paid out as incomes to the households for their factor services rendered, so the households get enough money to buy the goods supplied. This means that the supply of a product through the process of production generates the necessary income (earned by the factor of production in the form of wages, interest, rent and profits) to demand the goods produced. By this method, an equivalent demand is created in accordance with supply. According to Say, the main source of demand is the flow of factor incomes generated from the process of production itself. Any productive process has generally two effects:

(1) Due to the employment of factors of production in the process, an income stream is generated in the economy on account of the payment of remuneration to the factors of production; and

(ii) a certain output results which is supplied to the market.

Thus, according to Say's Law, additional output creates addit ional incomes, which creates an equal amount of extra expenditures Therefore, every product produced generates equivalent amount of purchasing power (income) in the economy which ultimately leads to its sale. In short, a new production process, by paying out income to its employed factors. generates demand at the same time as it adds to supply. Thus, every increase in production soon justifies itself by a matching increase in demand. Then, by doubling production, the producer would invariably double sales too.

In his Principles of Political Economy, J. S. Mill provides his version of Say's Law as follows:

"What constitutes the means of payment for commodities is simply commodities. Each person's means of paying for the production of other people consists of those which he himself possesses. Should we suddenly double the productive powers of the country, we should double the supply of commodities in every market; but we should by the same stroke, double the purchasing power, Every-body would bring a double demand as well as supply, everybody would be able to buy twice as much, because everyone would have twice as much to offer in exchange.

According to Say's Law, as every additional supply creates an additional demand, there can be no general overproduction. It stresses that aggregate supply always equals aggregate demand. In other words, while individual goods can be over-produced, the supply need not equal demand in a single market. But it will be absorbed by the economy as a whole. At the same time, while general over-production was considered impossible according to Say's Law, it also denied the possibility of a deficiency in aggregate demand. Similarly, it also denied the possibility of general unemployment. For, if resources are less than fully employed, there are incentives to expand production as entrepreneurs always strive for maximization of profits

ASSUMPTION OF THE SAY'S LAW OF MARKET

Say's law of market is based on the following assumptions:

1. There is optimum allocation of resources.

2. Commodity prices and factor prices are in perfect equilibrium.

3. There is free enterprise economy.

4. There is no government intervention in the economic activities. The government follows laissez-faire policy to facilitate automatic adjustment and smooth working of the market mechanism in the capitalist economic system.

5. The size of the market has no limits. Thus, there is automatic expansion of the market with an increase in output offered for sale.

6. The free market economy and its working of price mechanism provide duc scope to labour supply and the rising population also stimulate capital formation.

7. The circular flow of money is regular and continuous without any leakages.

8. Since all savings are automatically invested, saving always equal investment, Savings-investment equality is the basic condition of equilibrium in the economy. It is maintained by interest flexibility.

IMPLICATIONS OF SAY'S LAW MARKET

The Say's Law of markets implies that:

1. In the long run, free economy automatically attains equilibrium at full employment level.

2. There is automatic adjustment when supply creates its own demand. Increase in supply will meet its own demand in the process of the functioning of a free capitalist economy. Hence, there is no need for the government to intervene. On the contrary, any government interference in the economic field comes in direct conflict with the self-adjusting mechanism of the Say's Law of markets.

3. Since supply creates its own demand automatically there is no possibility of any general over-production. Thus, Say's Law is a denial of the possibility of a deficiency in aggregate demand.

4. When there is no general overproduction, then there can be no problem of general unemployment in the long run, and the economy tends to remain at full employment equilibrium level.

5. In an expanding free enterprise economy when new workers and new firms are productively absorbed, they do not supplant the output, income and employment of the existing ones and as they release additional output and income, the community becomes automatically rich with increasing size of national income It also means that employment of new or unused resources in productive process tends to pay its own way and confer benefits to the society at large.

6. Supply creates its own demand in real terms. Thus, money is just a veil. Behind the flow of money, there is a real flow of goods and services which is important. Thus, changes in the supply of money has no impact on the real economy's process of equilibrium at full employment level.

7. A capitalist economy under the laissez-faire policy has built-in flexibility. It functions automatically to optimum adjustments through freely operating market mechanism and the price system.

8. Savings investments equality is brought about by the flexibility of interest rates. Rate of interest is, thus, a strategic variable in the equilibrium process of the economy.

9. Wage flexibility in a competitive labour market tends to bring about full employment of workers.

KEYNES'S OBJECTION TO CLASSICAL THEORY OF EMPLOYMENT

Though logically the classical theory is sound and well-knit on the basis of its axioms, Keynes has criticized and completely discarded it on the ground of its false premises.

The following are the main points of Keynes's criticisms against the classical theory:

Assumption of full employment unrealistic:

(1) Keynes considered the fundamental classical assumption of full employment equilibrium condition as unrealistic. To him, there is the possibility of equilibrium condition at under-employment as a normal phenomenon. Keynes regarded it as a rare phenomenon. Keynes in fact considered the under employment condition of equilibrium to be more realistic.

(2) **Long term equilibrium opposed.** Keynes opposed the classical insistence on long-term equilibrium; instead, he attached greater importance to short term equilibrium.

(3) **Disregard the impossibility of general over production and disequilibrium**. Classical economists rest on the Say's Law which blindly assured that supply always creates its own demand and affirmed the impossibility of general overproduction and disequilibrium in the economy. Keynes totally disagreed. with this and stressed the possibility of supply exceeding demand, causing disequilibrium in the economy and pointed out that there is no automatic self adjustment in the economy.

(4) **Refuted the process of equilibrium automatic and self-balancing**. Say's Law. laid down that supply and demand would always be in equilibrium and the process of equilibrium was automatic and self-balancing. Keynes refuted this too. He pointed out that the structure of

modern society rests on two principal classes the rich and the poor-and there is unequal distribution of wealth between them. The haves have too much of wealth all of which cannot be consumed by them and the have-nots too little even to meet their minimum consumption needs. Thus, national production can exceed national consumption, which means a deficiency in aggregate demand in relation to additional supply, and this results in general overproduction and unemployment. Thus, Keynes pointed out the error of the classicists in denying the general overproduction and unemployment.

(5) **Rejected Pigou's notion of unemployment disappear on acceptance of low wages by the workers.** Keynes strongly objected to the classical formulation or employment theory, particularly Pigou's notion that unemployment will disappear if the workers will just accept sufficiently low wage rates. He rejected Pigou's plea for wage flexibility as a means of promoting employment at a time of depression. According to Pigou, employment in the society can be increased by a device of money wage cuts and noted that by following a policy of wage-cuts, costs would fall, resulting in the expansion of demand, greater production, and therefore, greater investments and employment.

(6) **Objected to the classical idea of saving and saving investmen**t. Keynes also attacked the classical theory in regard to saving and investment. He objected to the classical idea of saving and investment equilibrium through flexible rates of interest. To him saving and investment equilibrium are obtained through changes in income rather than in the interest rate.

(7) **Attacked the Classicists for their unrealistic approach to the problems of the contemporary capitalist economic system.** Keynes strongly attacked the classicists for their unrealistic approach to the problems of contemporary capitalist economic system. Pigou's plea for a return to free perfect competition to solve the problem of unemployment seemed 'obsolete' in the changed conditions of the modern world. Pigou grieved at the modern state's intervention with the free working of the economic system because it causes unemployment. He also condemned the activities of the trade unions which prevent the falling of wage level and thereby cause increase in unemployment. Keynes pointed out that trade unions are an integral part of modern society and they will grow further. Besides, a progressival welfare state will not refrain from accepting or adopting the principle of fixation of minimum wages. Keynes wanted

governmental action to bring about adjustment in the economic system, because the modern economic system is not self-adjusting in character as assumed by the classicists.

Conclusion

In view of the above we may say that classical theory of employment, in Keynes's view, is unrealistic and irrelevant to the present conditions and out of date, and, thus, cannot be a guide to the solution of modern economic problems. Thus, the basic need is for a theory which will diagnose the ills of the modem economic system and furnish a guide for the solution of problems like unemployment, business cycles, inflation and other economic ills.

Keynes‟ Theory of Employment: Concept of Effective Demand

Great Depression of 1930's created problems of increasing unemployment, reducing national income, declining prices and failing firms increased in intensity. The classical model miserably failed to explain and provide a workable solution for how to escape the depression. Definition of a recession A recession is characterized as a period of negative economic growth for two consecutive quarters. In a recession, unemployment will rise, output fall and government borrowing increase. Definition of depression A depression is a recession but much more severe and long lasting. There is no agreed upon definition of a depression. But, generally a depression would have some of the following characteristics.

• Decline in output for a prolonged period e.g. greater than 2 years.

• A drop in output of 10% or greater.

• Unemployment rate touching 20% (rather than the 10% rate associated with recessions)

It was at that time when J. M. Keynes wrote his famous book ' General Theory'. In it he presented an explanation of the Great Depression of 1930's and suggested measures for the solution. He also presented his own theory of income and employment. According to Keynes- "In the short period, level of national income and so of employment is determined by aggregate demand and aggregate supply in the country. The equilibrium of national income occurs where aggregate demand is equal to aggregate supply. This equilibrium is also called effective demand point".

What is Effective Demand?

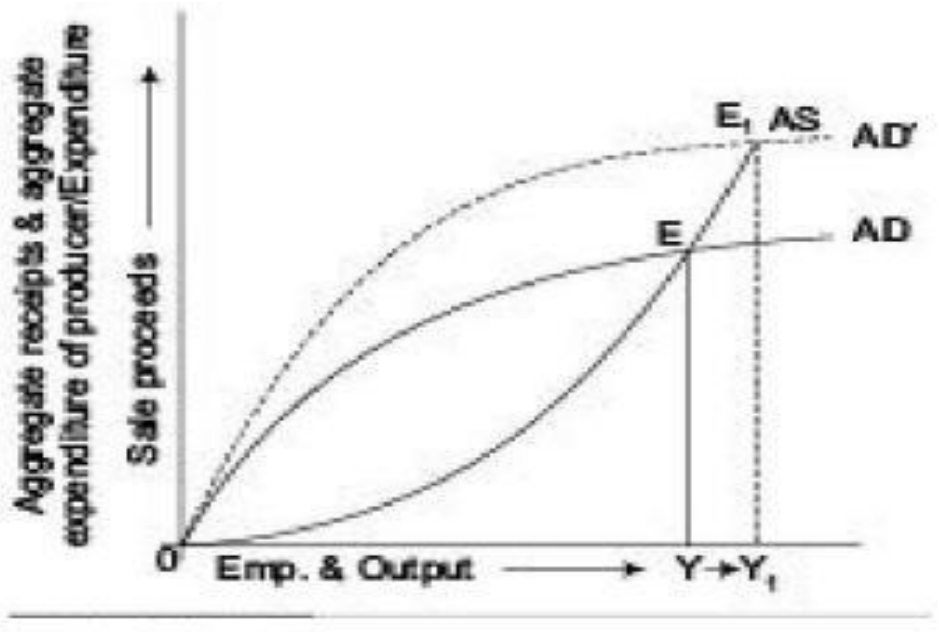
Keynes‟ theory of employment is a demand-oriented theory. This means that Keynes visualized employment/unemployment from the demand side of the model. According to Keynes, the volume of employment in a country depends on the level of effective demand of people for goods and services. Unemployment is attributed to the deficiency of effective demand. It is to be kept in mind that Keynes‟ theory is a short run theory when population, labor force, technology, etc., do not change. Keynes‟ theory of employment is based on the principle of effective demand. In order to understand the concept of effective demand we have to visualize two prices operating in the economy, viz., aggregate demand price and aggregate supply price.

The aggregate demand price refers to the level of price (aggregate or average) at which goods and services are actually sold, that is, the producers actually receive the price by selling their goods and services. In other words, this is the price which the consumers are prepared to pay for purchasing goods and services.

Aggregate supply price is the minimum price necessary for producers to carry on production of such foods and services. Below this minimum price no producer would be willing to cover production. Now, in the short run, as long as the aggregate demand price is greater than the aggregate supply price, all producers will experience profits which would motivate them to increase output and employment. Only when the aggregate demand price is just equal to the aggregate supply price the producers find themselves in a state of indifference or „equilibrium. If this point is exceeded, i.e., if aggregate supply price is greater than the aggregate demand price so that producers are not able to receive their expected minimum price, they would rather be rethinking about continuing output and employment. The point of equilibrium or equality between aggregate demand and aggregate supply prices has been defined as the “effective demand‟.

GRAPHICAL EXPLAINATION With the idea of aggregate demand and aggregate supply prices are associated two curves, aggregate demand curve and aggregate supply curve. While both the curves appear as upward rising from left to right, the former (aggregate demand curve) lies above the latter aggregate supply curve). Also, while AD curve increases at a decreasing rate, the AS curve increases with an increasing rate . The equilibrium in the economy and equilibrium level of employment occurs at point YE where AD =AS with equilibrium level of

employment of OY. However, OY is not necessarily the full employment level even though economy is at equilibrium. This is what Keynes defined as an underemployment equilibrium. In fact, the total available supply of labour is OY1, more than OY by YY1, suggesting the magnitude of involuntary unemployment.



Why does such a situation of underemployment equilibrium develop in the economy? Keynes visualizes that the extent of aggregate demand (or, aggregate expenditures) falls short of the producers expectations (or, aggregate supply) or their minimum supply prices necessary to continue output and absorb the unemployed labour force. Clearly, the prescription suggested is to increase the level of aggregate demand. In terms of Fig. , it would possibly happen when the entire AD function shifts upward so much that AD intersects AS beyond E and employment increases so much to allow the producers to produce at the "potential level", Y1, as shown in Figure by shifted AD curve and the ultimate equilibrium point of E. Thus, in terms of Keynesian analysis, economy may achieve „equilibrium" but not necessarily at full employment output. It is a coincidence if that happens but the normal situation is that of underemployment equilibrium with potential output greater than the actual output.

UNIT -4

NATIONAL INCOME DETERMINATION

DETERMINATION OF NATIONAL INCOME IN TWO SECTOR/ CIRCULAR FLOW OF INCOME IN TWO SECTOR MODEL

What is Circular Flow of Income?

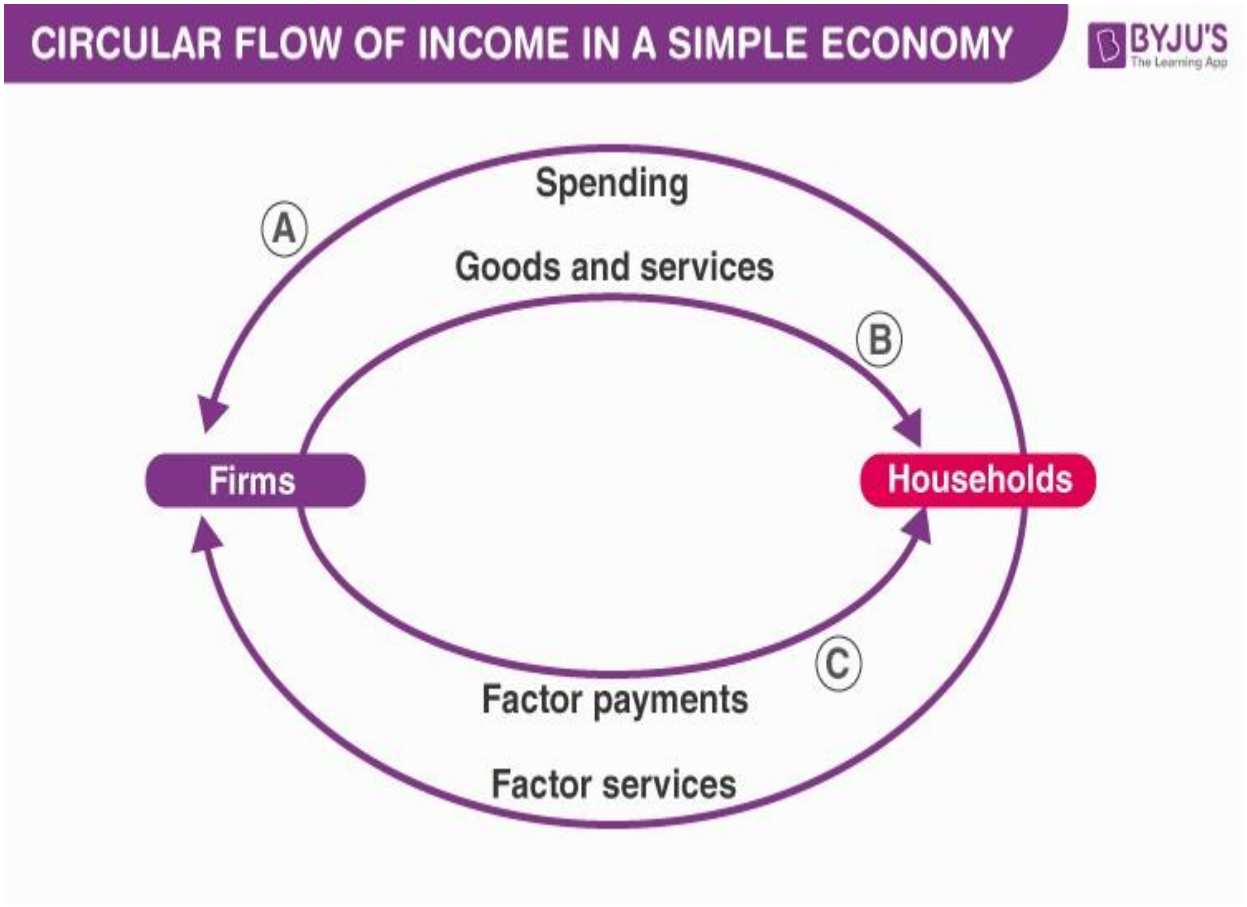
The circular flow means the unending flow of production of goods and services, income, and expenditure in an economy. It shows the redistribution of income in a circular manner between the production unit and households.

These are **land, labour, capital, and entrepreneurship.**

- The payment for the contribution made by fixed natural resources (called land) is known as rent.
- The payment for the contribution made by a human worker is known as wage.
- The payment for the contribution made by capital is known as interest.
- The payment for the contribution made by entrepreneurship is known as profit.

Circular Flow of Income in a Two-Sector Economy

It is defined as the flow of payments and receipts for goods, services, and factor services between the households and the firm sectors of the economy.

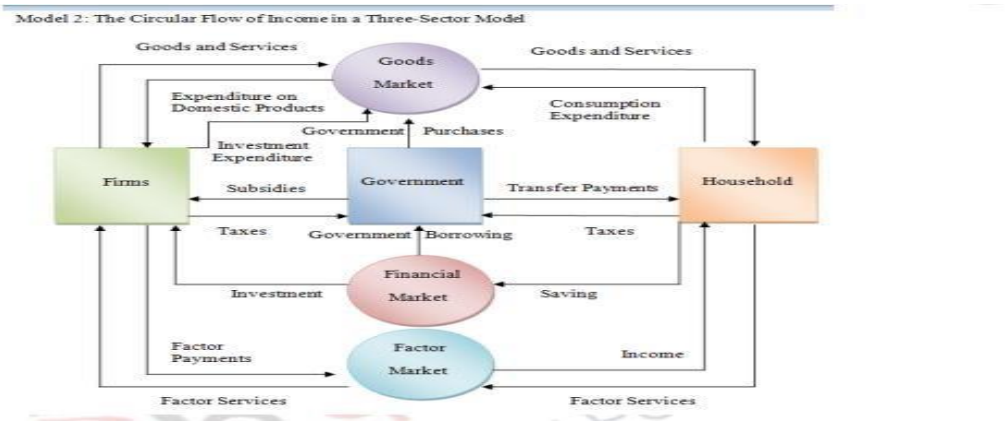


Explanation

- The outer loop of the diagram shows the flow of factor services from households to firms and the corresponding flow of factor payments from firms to households.
- The inner loop shows the flow of goods and services from firms to households and the corresponding flow of consumption expenditure from households to firms.
- The entire amount of money, which is paid by firms as factor payments, is paid back by the factor owners to the firms.

Circular Flow of Income in a Three-Sector Economy

The Circular Flow of Income in a Three – Sector Model The three sector model of circular flow of income highlights the role played by the government sector. This is a more realistic model which includes the economic activities of the government however; we continue to assume the economy to be a closed one. There are no transactions with the rest of the world. The government levies taxes on the households and the firms and it also gives subsidies to the firms and transfer payments to the household sector. Thus, there is income flow from the household and firms to the government via taxes in one direction and there is income outflow from the government to the household and firms in the other direction. If the government revenue falls short of its expenditure, it is also known to borrow through financial markets. This sector adds three key elements to the circular flow model, i.e., taxes, government purchases and government borrowings. This is explained with the help of the following diagram



A three-sector economy model rectifies some of the drawbacks of the two-sector model by introducing the following.

1. The government plays a pivotal role in consuming a major portion of the money flow in taxes.
2. Hence, the flow of money follows from the firms and households to the government in taxes.
3. The government utilizes taxes to develop infrastructure and other services like healthcare, education, etc. So, the government pays back in terms of incentives and purchases goods from the firms.

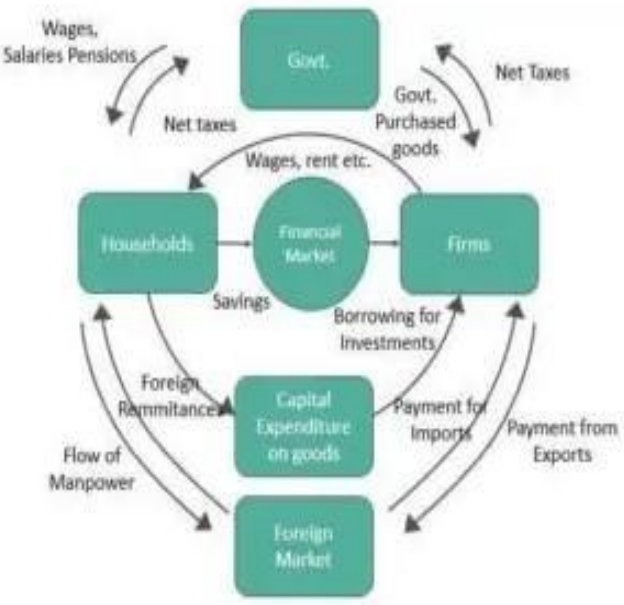
4. The government pays the households interest rates in government securities, pay revisions, government jobs, etc.
5. Together, it all completes the circular movement of money.
6. If the government‟s income from the taxes is less than its expenditure, it is said to have a deficit budget.

As such, the role of government cannot be ignored in any economy because of such a huge control it possesses over the economic cycle. Consequently, governmental interference affects the overall economic performance of a country.

A three-sector economy does not consider the role of foreign markets, which has become even more prevalent in the current globalized world.

Circular Flow of Income in A Four Sector Economy

The four-sector economy model is an open-ended economy that goes beyond by considering the foreign sector‟s role in the overall economic cycle.



The main features of the four-sector economy are as follows:

1. With the introduction of the foreign sector, the scope widens further. The money flows to households or firms when they buy goods and services from a foreign country, a lso known as imports.
2. The money flows back to households when foreign countries give them employment. For firms, money flows back when foreign countries purchase goods and services, also called exports.
3. If the value of imports is equal to the value of exports, it is called a balanced trade. If imports are greater than exports, it is a trade deficit. If exports are greater than imports, it is called a trade surplus.
4. However, in the diagram, for the sake of simplicity, the trade relation (for goods and services) is shown only between firms and foreign markets.

Thus, we can say that the foreign players are investing in the US market, or the US firms rely on the foreign market to fulfill their production needs and vice-versa.

MEANING OF INVESTMENT MULTIPLIER

The Investment Multiplier J.M. Keynes has formulated the concept of investment multiplier, the multiplier refers to the effects of changes to investment outlays on aggregate income through induced consumption expenditures. Thus, the multiplier expresses a relationship between an initial increment in investment and the resulting increase to aggregate income. In fact, the multiplier is the name given to the numerical coefficient which indicates the increase in incomes which will result in response to an increase on investment. For instance, if investment increases by one crore of rupees and the aggregate income (or the national income) rises by four crores of rupees, then the multiplier is 4 (increase in income of Rs. 4 crores + increase in investment of Rs. 1 crore 4). The multiplier may be defined as the ratio of the realised changed in aggregate income to the given change in investment.

Symbolically,

$$K = \Delta Y/\Delta I$$

Where, K stands for the investment multiplier, ΔY represents change in income, and ΔIl refers to a given change in investment.

It follows that, given the multiplier coefficient K, we can measure the resulting change in the level of income caused by an intended change in investment.

$$\Delta Y = k.\Delta I$$

ASSUMPTIONS OF INVESTMENT MULTIPLIER

The assumptions which are implicit in the Keynesian theory of the multiplier may be stated as under:

1. The original propensity to consume remains constant during the income propagation.

2. Fiscal and monetary policies remain stable, so that they do not affect the propensity to consume.

3. Excess capacity exists in the economic system. The assumption is that the economy operates at less than full-employment level, so that the multiplier effect is realized in real terms in that it raises the level of output and employment.

4. A closed economy model is assumed: That is, the country has no foreign trade activity. With this assumption, the impact of international economic transaction and consequent position of "the balance of payments on the domestic level of income and consumption is ruled out.

5.A static economy model is assumed. That is, there is absence of dynamic change in the economy. The state of technology, capital formation and accumulation, labour supply, stock of raw materials, power resources and other input variables are assumed to be given.

6. There is no significant time lag involved between the receipt of income and its expendit ure. Thus the process of income propagation in each round assumed to be instantaneous.

SHORT COMINGS OF THE MULTIPLIER THEORY

Keynes's multiplier theory has the following drawbacks/Short comings.

1. By assuming an instantaneous relationship between income, consumption and investment, Keynes treated the multiplier as a timeless phenomenon. In reality, however, there is a time lag (interval) between the receipt of income and consumption expenditure of the same as well as between consumption expenditure and its reappearance as income. Thus, modern economists point out that the multiplier effect always takes some time to materialize its full impact That is time lag is very important to get the investment material.

2. Keynes's principle of investment multiplier is a static phenomenon, which is unsuited to the changing processes of the dynamic world. Under certain static assumptions, it shows the process of income propagation from one point of equilibrium to another, there is no analysis of the actual sequence of events nor is there a reckoning of time lag. The result is obtained only after under static conditions.

3. Keynes presents no empirical evidence of his multiplier theory. As Gottfried Haberler points out, "Keynes offers no adequate proof, only a number of rather disconnected observations. His central theoretical idea about the relationship between the propensity to consume and the multiplier, which is destined to give shape and strength to these observations turns out to be not an empirical statement which tells us something about the real world, but a barren algebraic relation which no appeal to facts can either confirm or disprove. In short. Keynes's theory of multiplier is an unverified hypothesis.

4. Probably, the greatest weakness of the multiplier theory, according to Gordon, is its exclusive emphasis on consumption. It would be more realistic to speak of a "marginal propensity to spend" rather than consumer, and then to consider the repercussions of an initial increase in investment, not only on consumption but also on total private investment and government spending.

5. The multiplier takes into account only the effects of induced consumption on income; it neglects the repercussions of induced consumption on induced investment. It fails to see the typical relationship between the demand for capital goods is a derived demand.

6. Professor Hazlitt held that about the concept of multiplier some Keynesians make fuss than about anything else in the Keynesian system. In his view, there can never be any precise , pre-

determinable or mechanical relationship between investment and income, and that the multiplier is in fact a worthless concept. It is a myth.

LIMITATIONS OR LEAKAGES OF INVESTMENT MULTIPLIER

Leakages are the potential diversions from the income stream which tend to weaken the multiplier effect of new investment. Given the marginal propensity to consume, the increase in income in each round declines due to leakages in the income steam and ultimately the process of income propagation "peters out". The following are the important leakages:

1. Saving. Saving is the most important leakage of the multiplier process. Since the marginal propensity to consume is less than once, the whole increment in income is not spent on consumption. A part of it is saved which peters out of the income stream and the increase in income in the next round declines. Thus the higher the marginal propensity to save, the smaller the size of the multiplier and the greater the amount of leakage out of the income stream, and vice versa. For instance, if MPS=1/6, the multiplier is 6, according to the formula K=1/MPS and the MPS of 1/3 gives a multiplier of 3.

2. Strong Liquidity Preference. If people prefer to hoard the increased income in the form of idle cash balances to satisfy a strong liquidity preference for the transaction, precautionary and speculative motives, that will act as a leakage out of the income stream. As income increases people will hoard money in inactive bank deposits and the multiplier process is checked.

3. Purchase of Old Stocks and Securities . If a part of the increased income is used in buying old stocks and securities instead of consumer goods, the consumption expenditure will fall and its cumulative effect on income will be less than before. In other words, the size of the multiplier will fall with a fall in consumption expenditure when people buy old stocks and shares.

4. Debt Cancellation. If a part of increased income is used to repay debts to banks, instead of spending it for further consumption, that part of the income peters out of the income stream. In case, this part of the increased income is repaid to other creditors who save or hoard it, the multiplier process will be arrested.

5. Price inflation. When increased investment leads to price in nation, the multiplier effect of increased income may be dissipated on higher prices. A rise in the prices of consumption goods

implies increased expenditure on them. As a result, increased income is absorbed by higher prices and the real consumption and income fall. Thus price inflation is an important leakage which tends to dissipate increase in income and consumption on higher prices rather than in increasing output and employment.

6. Net Imports. If increased income is spent on the purchase of imported goods it acts as a leakage out of the domestic income stream. Such an expenditure fails to effect the consumption of domestic goods. This argument can be extended to net imports when there is an excess of imports over exports thereby causing a net outflow of funds to other countries.

7. Undistributed Profits . If profits accruing to joint stock companies are not distributed to the shareholders in the form of dividend but are kept in the reserve fund, it is a leakage from the income stream undistributed profits with the companies tend to reduce the income and hence further expenditure on consumption goods thereby weakening the multiplier process.

8. Taxation. Taxation policy is also an important factor in weakening the multiplier process. Progressive taxes have the effect of lowering the disposable income of the taxpayers and reducing their consumption expenditure. Similarly commodity taxation tends to raise the prices of goods, and a part of increased income may be dissipated on higher prices. Thus increased taxation reduces the income stream and lowers the size of the multiplier.

9. Excess Stocks of Consumption Goods. If the increased demand for consumption goods is met from the existing excess stocks of consumption goods there will be no further increase in output, employment and income the multiplier process will come to a half till the old stocks are exhausted.

UNIT V

THEORIES OF CONSUMPTION INVESTMENT

Keynes's Psychological Law of Consumption

Keynes‟s Theory of Consumption: Keynes in his “General theory”, published in 1936, laid the foundations of modern macroeconomics. The concept of consumption function plays an important role in Keynes‟ theory of income and employment.

According to Keynes, of all the factors it is the current level of income that determines the consumption of an individual and also of society. Keynes laid stress on the absolute size of current income as a determinant of consumption, his theory of consumption is also known as absolute income theory of consumption.

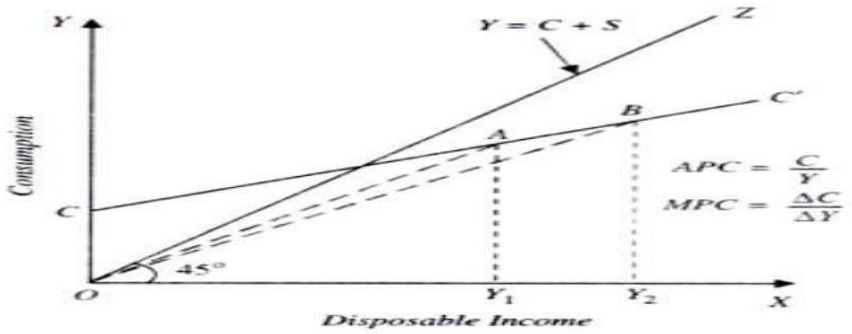
Keynes put forward a psychological law of consumption, according to which, as income increases consumption increases but not by as much as the increase in income. In other words, marginal propensity to consume is less than one. 1> MPC>0 While Keynes believed that there are many other factors including interest rate and wealth that influenced the level consumption expenditure, he emphasized that it is the current level of income on which the consumption spending of an individual and the society depends.

About consumption behaviour, Keynes makes three points. First, he suggests that consumption expenditure depends mainly on absolute income of the current period, that is, consumption is a positive function of the absolute level of current income. The more income in a period one has, the more is likely to be his consumption expenditure in that period. In other words, in any period the rich people tend to consume more than the poor people do. Secondly, Keynes points out that consumption expenditure does not have a proportional relationship with income.

According to him, as the income increases, consumption increases but not in the same proportion. The proportion of consumption to income is called average propensity to consume (APC). Thus, Keynes argues that average propensity to consume (APC) falls as income increases.

The Keynes‟ consumption function can be expressed in the following form C = a + bYd where C is consumption expenditure and Yd is the real disposable income which equals gross national income minus taxes, a and b are constants, where a is the intercept term, that is, the amount of consumption expenditure at zero level of income. Thus, a is autonomous consumption. The parameter b is the marginal propensity to consume (MPC) which measures the increase in consumption spending in response to per unit increase in disposable income.

Thus MPC = ΔC/ΔY Since the average propensity to consume falls as income increases, the marginal propensity to consume (MPC) is less than the average propensity to consume (APC).



The Keynesian consumption function is depicted in Fig . In Fig. we have shown a linear consumption function with an intercept term. In this form of linear consumption function, though marginal propensity to consume (ΔC/ΔY) is constant, average propensity to consume is declining with the increase in income as indicated by the slopes of the lines OA and OB at levels of income Y1 and Y2 respectively. The straight line OB drawn from the origin indicating average propensity to consume at higher income level Y2 has a relatively less slope than the straight line OA drawn from the origin to point A at lower income level Y1. The decline in average propensity to consume as the income increases implies that the proportion of income that is saved increases with the increase in national income of the country. This result also follows from the studies of family budgets of various families at different income levels. The fraction of income spent on consumption by the rich families is lower than that of the poor families. In other words, the rich families save a higher proportion of their income as compared to the poor families.

The assumption of diminishing average propensity to consume is a significant part of Keynesian theory of income and employment. This implies that as income increases, a progressively larger

proportion of national income would be saved. Therefore, to achieve and maintain equilibrium at full-employment level of income, increasing proportion of national income is needed to be invested. If sufficient investment opportunities are not available, the economy would then run into trouble and in that case it would not be possible to maintain full employment because aggregate demand will fall short of full-employment output. On the basis of this increasing proportion of saving with the increase in income and consequently, the emergence of the problem of demand deficiency, some Keynesian economists based the theory of secular stagnation on the declining propensity to consume.

rawbacks of the Absolute Income Hypothesis First serious drawback of the Keynes's absolute income hypothesis is that it is based more on

introspection rather than on observed facts. It is also argued that the Keynesian theory is 'Conjectural-a

theory not supported by empirical data on consumption and disposable income. Second, the early empirical studies have supported only the first and the third properties of the Keynesian consumption function. That is, the empirical tests have supported the view that C-f(Y) and ACAY<CIY. The second and the fourth properties have not only failed to stand the empirical test and have also been a major source of controversy. Third, and more importantly, the post-War studies based on the US data cast serious doubts on the validity of the simple Keynesian consumption function. Kuznets's study", (which earned him Nobel Prize) of the disposable income and savings in the US during the period from 1869 to 1929 disclosed that MPC remained constant during the whole reference period and that MPC APC Kuznets estimated a consumption function of the form C-bY, b being approximately equal to 0.9. This contradicted the third property of the Keynesian consumption function, i.e., MPC APC. Furthermore, the Keynesian consumption function applied to the pre-War data predicted a consumption level which was much higher than that of the aggregate income. This created doubts about the empirical validity of the Keynesian consumption theory.

RELATIVE INCOME HYPOTHESIS

Consumption Relative income theory has been given by an American economist JS Duesenberry. The relative income hypothesis of James Duesenberry is based on the rejection of the two fundamental assumptions of the consumption theory of Keynes. Duesenberry states that:

(1) every individual‟s consumption behaviour is not independent but interdependent of the behaviour of every other individual, and

(2) that consumption relations are irreversible and not reversible in time. A rich person will have a lower APC because he will need a smaller portion of his income to maintain his consumption pattern. On the other hand, a relatively poor man will have a higher APC because he tries to keep up with the consumption standards of his neighbours or associates. The relat ive income hypothesis suggests that households try to imitate or copy the consumption levels of their neighbours or other households in a particular community. This is called 'Demonstration Effect'

This provides the explanation of the constancy of the long-run APC because lower and higher APCs would balance out in the aggregate. Thus even if the absolute size of income in a country increases, the APC for the economy as a whole at the higher absolute level of income would be constant. But when income decreases, consumption does not fall in the same proportion because of the Ratchet Effect.

The hypothesis states that during a period of prosperity, consumption will increase and gradually adjust itself to a higher level. Once people reach a particular peak income level and become accustomed to this standard of living, they are not prepared to reduce their consumption pattern during a recession.

As income falls, consumption declines but proportionately less than the decrease in income because the consumer dissaves to sustain consumption. On the other hand, when income increases during the recovery period, consumption rises gradually with a rapid increase in saving. Economists call this the Ratchet Effect.

It’s Criticisms:

1. No Proportional Increase in Consumption:

The relative income hypothesis assumes a proportional increase in income and consumption. But increases in income along the full employment level do not always lead to proportional increases in the consumption.

2. No Direct Relation between Consumption and Income:

This hypothesis assumes the relation between consumption and income to be direct. But this has not been borne out by experience. Recessions do not always lead to decline in consumption, as was the case during the recessions of 1948-49 and 1974-75.

3. Reversible Consumer Behaviour:

According to Micheal Evants, "The consumer behaviour is slowly reversible over time, instead of being truly irreversible. Then previous peak income would have less effect on current consumption, the greater the elapsed time from the last peak." Even if we know how a consumer spent his previous peak income, it is not possible to know how he would spend it now.

4. Neglects Other Factors:

This hypothesis is based on the assumption that changes in consumer"s expenditure are related to his previous peak income. The theory is weak in that it neglects other factors that influence consumer spending such as asset holdings, urbanisation, changes in age-composition, the appearance of new consumer goods, etc.

5. Consumer Preferences do not depend on others:

Another unrealistic assumption of the theory is that consumer preferences are interdependent whereby a consumer"s expenditure is related to the consumption patterns of his rich neighbour. But this may not always be true.

Permanent Income Theory of Consumption:

Permanent income theory of consumers" behaviour has been put forward by a well-known American economist, Milton Friedman. Though Friedman"s permanent income hypothesis differs from life cycle consumption theory in details, it has important common features with the

latter. Like the life cycle approach, according to Friedman, consumption is determined by long-term expected income rather than current level of income.

It is this long-term expected income which is called by Friedman as permanent income on the basis of which people make their consumption plans. To make his point clear, Friedman gives an example which is worth quoting. According to Friedman, an individual who is paid or receives income only once a week, say on Friday, he would not concentrate his consumption on one day with zero consumption on all other days of the week.

He argues that an individual would prefer a smooth consumption flow per day rather than plenty of consumption today and little con•sumption tomorrow. Thus consumption in one day is not determined by income received on that particular day. Instead, it is determined by average daily income received for a period. This is on the line of life cycle hypothesis. Thus, according to him, people plan their consumption on the basis of expected average income over a long period which Friedman calls permanent income.

It may be noted that permanent income or expected long-term average income is earned from both "human and non-human wealth". The income earned from human wealth which is also called human capital refers to the return on income derived from selling household‟s labour services, that is, efforts and abilities of its labour.

This is generally referred to as labour income. Non-human wealth consists of tangible assets such as saved money, debentures, equity shares, real estate and consumer durables. It is worth noting that Friedman regards consumer durables such as cars, refrigerators, air conditioners, television sets as part of households‟ non-human wealth. The imputed value of the flow of services from these consumer durables is considered as consumption by Friedman.

Relationship between Consumption and Permanent Income:

Now, what is the precise relationship between consumption and permanent income (that is, the expected long period average income). According to permanent income hypothesis, Friedman thinks that consumption is proportional to permanent income

$$C_P = kY_P$$

where

YP is the permanent income

CP is the permanent consumption

k is the proportion of permanent income that is consumed.

The proportion or fraction k of permanent income that is consumed depends upon the following factors:

1. Rate of interest (i):

At a higher rate of interest the people would tend to save more and their consumption expenditure will decrease. The lowering of rate of interest will have opposite effect on the consumption.

2. The proportion of non-human wealth to human wealth:

The relative amounts of income from physical assets (i.e., non-human wealth) and income from labour (i.e., human wealth) also affects consumption expenditure. This is denoted by the term w in the permanent consumption func•tion and is measured by the ratio of non-human wealth to income. In his permanent income hypoth•esis Friedman suggests that consumption expenditure depends a good deal on the wealth or assets possessed by the people. The greater the amount of wealth or assets held by an individual, the greater would be its propensity to consume and vice-versa.

3. Desire to add to one‟s wealth:

Lastly, households‟ preference for immediate consumption as against the desire to add to the stock of wealth or assets also determines the proportion of permanent income to be devoted to consumption. The desire to add to one‟s wealth rather than to fulfill one‟s wants of immediate consumption is denoted by u.

Thus rewriting the consumption function based on Friedman‟s permanent income hypothesis we have

CP =k (i, w, u) YP

The above function implies that permanent consumption is function of permanent income. The proportion of permanent income devoted to consumption depends on the rate of interest (i), the ratio of non-human wealth to labour income (w) and desire to add to the stock of assets (u).

Permanent and transitory income:

In addition to permanent income, the individual‟s income may contain a transitory component that Friedman calls as a transitory income. A transitory income is a temporary income that is not going to persist in future periods. For example, a clerk in an office may get a substantial income from overtime work in a month which he thinks cannot be maintained.

Thus, this large overtime income for a month will be transitory component of income. According to Fried•man, transitory income is not likely to have much effect on consumption.

Thus, income of an indi•vidual consists of two parts, permanent and transitory, which we may write as under:YM

= Yp + Yt

where YM is measured income in a period, Yp is the permanent income and Yt is transitory income.Measuring permanent income:

To make the permanent income hypothesis operational we need to measure permanent income. Permanent income, as is generally defined is "the steady rate of consump-tion a person could maintain for the rest of his or her life, given the present level of wealth and income now and in the future."

However, it is very difficult for a person to know what part of any change in income is likely to persist and is therefore permanent and what part would not persist and is therefore transitory. Friedman has suggested a simple way of measuring permanent income by relating it to the current and past incomes. According to him, permanent income is equal to the last year‟s income plus a proportion of change in income occurred between the last year and the current year.

Criticism of the permanent income hypothesis

First. Friedman's assumption that there is no correlation between transitory components of consumption and income is unrealistic. This assumption implies that with the increase or decrease in the measured income of the household, there is neither any increase or decrease in the measured income of the household, there is neither any increase or decrease in his consumption, because he either behavior. A person who has a windfall gain does not deposit the entire amount in his bank account buy enjoys the whole or part of it on his current consumption.
Second, Friedman's hypothesis states that the APC of all families, whether rich or poor, is the same in the long-run. But this is against the ordinary observed behavior of households. It is an established fact that low-income families do not have the capacities to save the same fraction of their incomes as the high income families.
Third, Friedman's use of the terms "permanent", "transitory", and "measured" have tended to confuse the theory. The concept of measured income mixes together permanent and transitory income on the one hand, and permanent and transitory consumption on the other.
Lastly, another weakness of the permanent income hypothesis is that Friedman does not make any distinction between human and non-human wealth and includes income from both in a single term in the empirical analysis of his theory.

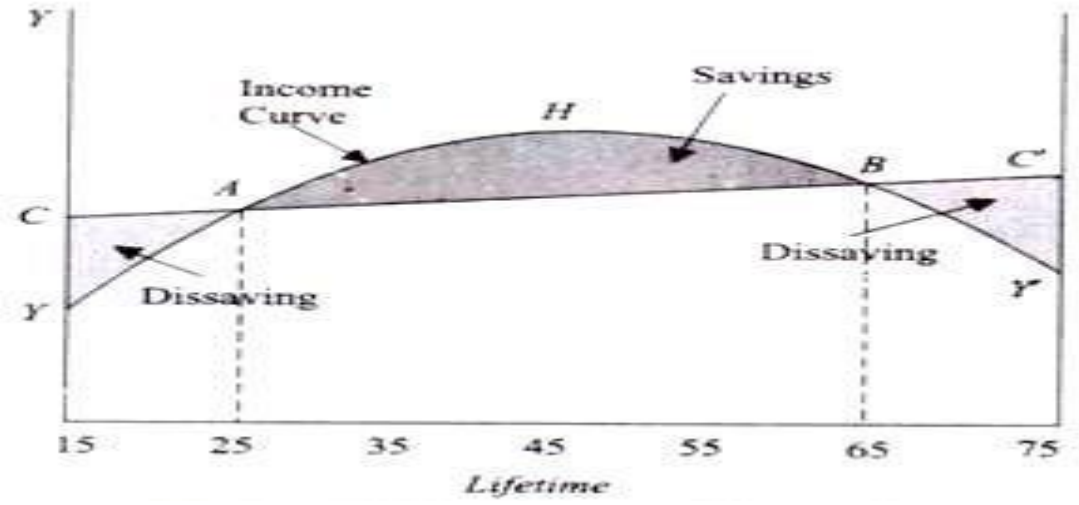
LIFE CYCLE THEORY OF CONSUMPTION:

An important post-Keynesian theory of consumption has been put forward by Modigliani and Ando which is known as life cycle theory. According to life cycle theory, the consumption in any period is not the function of current income of that period but of the whole lifetime expected income.

Thus, in life cycle hypothesis the individual is assumed to plan a pattern of consumption expenditure based on expected income in their entire lifetime. It is further assumed that individual maintains a more or less constant or slightly increasing level of consumption.

However, this level of consumption is limited by his expectations of lifetime income. A typical individual in this theory in his early years of life spends on consumption either by borrowing from others or spending the assets bequeathed from his parents.

It is in his main working years of his lifetime that he consumes less than the income he earns and therefore makes net positive savings. He invests these savings in assets, that is, accumulates wealth which he consumes in the future years. In his lifetime after retirement he again dis-saves, that is, consumes more than his income in these later years of his life but is able to maintain or even slightly increase his consumption in the lifetime after retirement.



Life cycle hypothesis has been depicted in Fig. It is assumed that a typical individual knows exactly at what age he will die. In Fig. , it is taken that the individual would die at the age of 75 years. That is, years 75 is his expected lifetime. It is further assumed in the life cycle theory that net savings in the entire lifetime is zero, that is, the savings done by the individual in his working years of his life is equal to the dissavings made by him in his early years of life before he is able to earn income as well as the dissavings which he makes after retire ment.

It is also assumed for the sake of simplicity that interest paid on his assets is zero. The curve YY shows income pattern of the whole life-time of the individual whereas CC‟ is the curve of

consumption which is assumed to be slightly increasing as the individual grows old. It is assumed that our individual enters into labour force (i.e., working life) at the age of 15 years.

It will be noticed from Fig. that upto the age of 25 years his income, though increasing, is less than his consumption, that is, he will be dissaving during the first 13 years of his working life. To finance hi s excess consumption over his income, he may be borrowing from others.

Beyond the age of 25 or point A on the income and consumption curves and upto the age of 65 years his income exceeds his consumption, that is, he will be saving during this period of his working life. With these savings he will build up assets or wealth. He may use these savings or wealth to pay off his debt incurred by him in the early stage of his working life. Another important motive of his savings and building up assets or wealth is to provide for his consumption after retirement when his income drops below his level of consumption.

It will be observed from the that beyond point B (that is, after retirement at 65 years) his current income falls short of his consumption and therefore he once again dissaves. He would be using his accumulated assets or wealth from his earlier working years to meet the dissavings after retirement at the age of 65. It is important to note that we assume that he does not intend to leave any assets for his children. Given this assumption, his net savings over his lifetime will be zero.

Therefore, in Fig., his savings during the period when he earns more than his consumption expenditure, that is, the shaded area AHB will be equal to the two areas of dissavings, CYA + BC‟Y‟. Thus he dies leaving behind no assets or wealth. He has planned his consumption expenditure over the years that his net savings at the time of death are zero. However, this assumption can be relaxed if he wishes to leave some assets or wealth for his children.

Some important conclusions follow from the life cycle theory of consumption. The fundamental idea of the life-cycle hypothesis is that people make their consumption plans for their entire lifetime and further that they make their lifetime consumption plans on the basis of their

expectations of lifetime income. Thus in the life cycle model consumption is not a mere function of current income but on the expected lifetime income. Besides, in life cycle theory the wealth presently held by individuals also affects their consumption.

Criticisms of Life Cycle Theory

- It assumes people run down wealth in old age, but often this doesn‟t happen as people would like to pass on inherited wealth to children. It assumes people are rational and forward planning. Behavioural economics suggests many people have motivations to avoid planning.
- People may lack the self-control to reduce spending now and save more for future.
- Life-cycle is easier for people on high incomes. They are more likely to have financial knowledge, also they have the „luxury‟ of being able to save. People on low-incomes, with high credit card debts, may feel there is no disposable income to save.
- Leisure. Rather than smoothing out consumption, individuals may prefer to smooth out leisure – working fewer hours during working age, and continuing to work part-time in retirement.
- Government means-tested benefits for old-age people may provide an incentive not to save because lower savings will lead to more social security payments.

INVESTMENT AND ITS TYPES

Investment is an asset or item accrued with the goal of generating income or recognition. In an economic outlook, an investment is the purchase of goods that are not consumed today but are used in the future to generate wealth. In finance, an investment is a financial asset bought with the idea that the asset will provide income further or will later be sold at a higher cost price for a profit.

Classification of investment

1. induced investment

2autonomous investment.

Induced investment

It is that investment which is undertaken as a result of a change in the level of income or consumption. It depends on profit expectations. Entrepreneurs purchase or produce capital goods when they anticipate high level of sales of final goods. This anticipation depends upon the level of income and the level of effective demand of consumers. An increase in the level of income leads to an increase in the level of employment and in the demand for consumer goods. This, in turn, results in an increase in investment. Thus, increased investment increases or decreases with the increase or decrease in the level of income. This functional relationship between income and investment could also be explained by means of a diagram.

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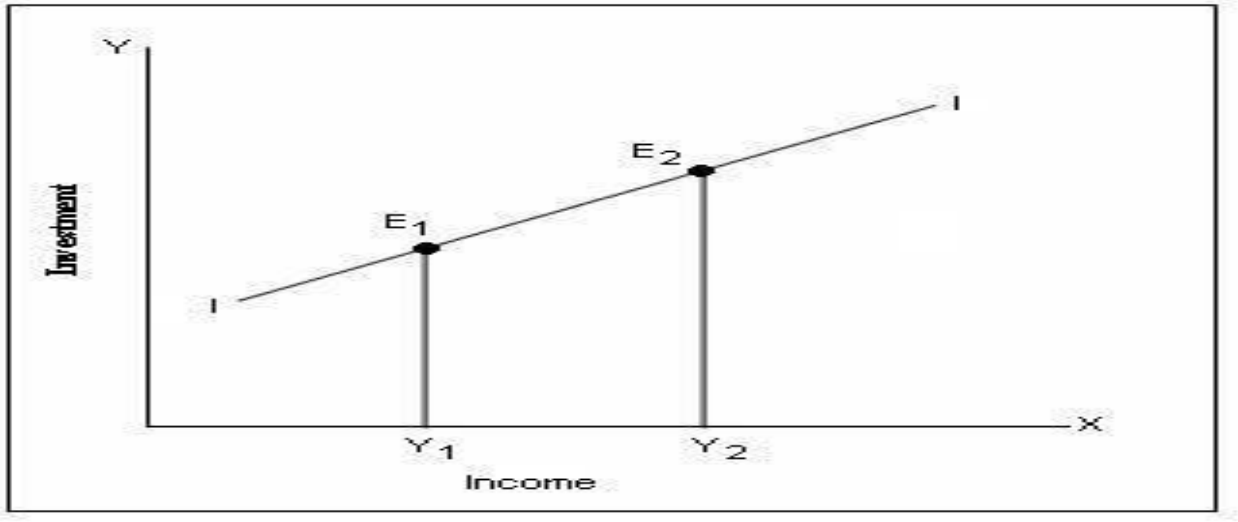
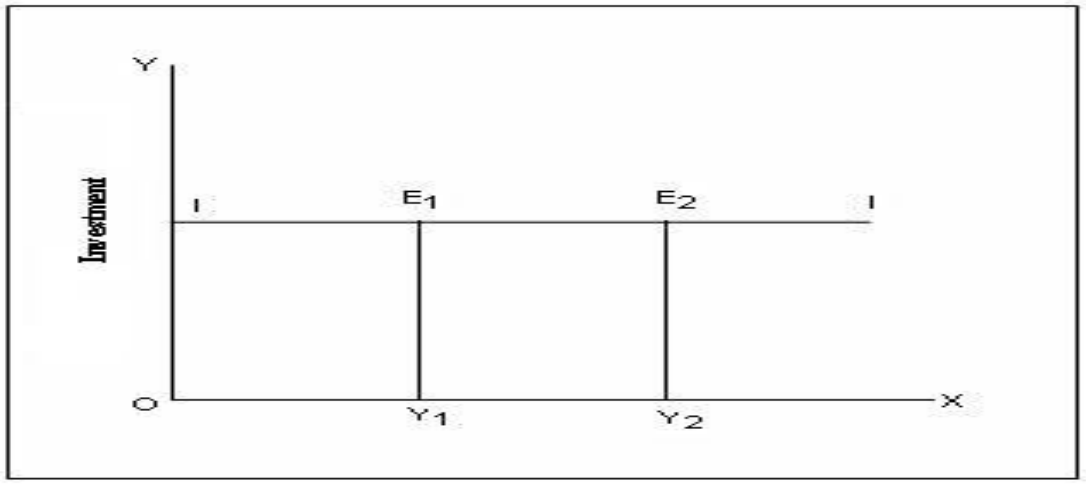


In, income is measured along the X-axis and investment along Y-axis. It represents induced investment curve. As income increase from OY_1 to OY_2, the level of induced investment increases from Y_1E_1 to Y_2E_2. So, the larger the income of the community, the higher will be the induced investment. Hence, induced investment is income-elastic.

Autonomous investment

It refers to that kind of investment which is not affected by the changes in the level of income or output and is not induced solely by profit, motive. Autonomous investment is not a function of output or income. It is related to the technological development, discovery of the new resources,

growth of population etc. On each level of income, autonomous investment remains unaltered. In it is autonomous investment which remains constant at each level of income. Hence autonomous investment is income-inelastic.



It should, however, be noted that autonomous investment does not always remain fixed or constant. It may be fixed at a point of time but may change over time. The government may increase this investment in future by undertaking new proper as construction of roads. bridges, etc.

CONCEPT OF MARGINAL EFFICIENCY OF CAPITALDEFINITION AND EXPLANATION:

Marginal efficiency capital (MEC) is a Keynesian concept. According to J.M. Keynes, nations output depends on its stock capital. An increase in the stock of capital increases output. The question is how much increase in investment raises output? Well, this depends on the productivity of new capital i.e. on the marginal efficiency of capital. Marginal efficiency of capital is the rate return expected to be obtainable on a new capital asset over its life time.

J.M. Keynes defines marginal efficiency of capital as the: "The rate of discount which makes the present value of the prospective yield from the capital asset equal to its supply price".

A businessman while investment in a new capital asset, examines the expected rate of net return (profit) on it during its lifetime against the supply price of capital asset (cost of capital asset) if

the expected rate of profit is greater than the replacement cost of the asset, the businessman will invest the money in the project.

Example: For example, if a businessman spends $10,000 on the purchase of a new griding machine. We assume further that this new capital asset continues to produce goods over a long period of time.

The net return (excluding meeting all expenses except the interest cost) of the griding machine expected to be $1000 per annum. The marginal efficiency of capital will be 10%. (1000/10000) X (100/1) = 10%

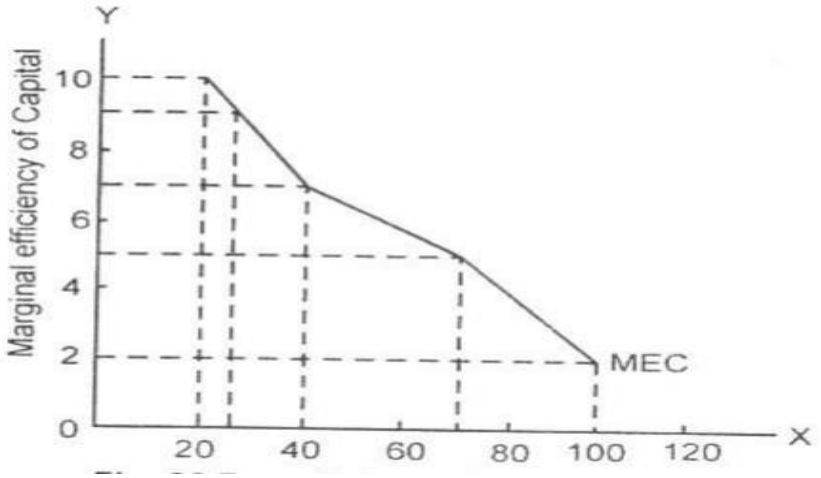
Formula: The following formula is used to know the present value of aeries of expected income throughout the life span of the capital assets. Sp = (R1 /1+r) + (R2 /1+r2) + ... = (Rn /1+rn)

Here: Sp = Stands for supply price of the new capital asset. R 1 + R2 - R n = Stands for returns received on yearly basis. R = It is the rate of discount applied each the years Schedule:

According to J.M. Keynes, the behavior of investment in respect of new investment depends upon the various stock of capital available in the economy at a particular period of time. As the stock of capital increases in the economy, the marginal efficiency of capital goes on diminishing.

Investment ($ in billion)	Marginal Efficiency of Capital
20	10%
25	9%
40	7%
70	5%
100	2%

Diagram/Curve:



In the above table, it is shown when stock of capital is equal to $20 billion, the marginal efficiency of capital is 10% while at a capital stock of $100 billion, it declines to 2%. This investment demand schedule when depicted graphically in figure 30.7 gives us the investment demand curve which goes on sloping downward from left to right. Relative Role of MEC and the Rate of Interest: The MEC and the rate of interest are the two important factors which affect the volume of new investment in a country. An investor while making a new investment, weighs the MEC of new investment against the prevailing rate of interest.

As long as the MEC is higher than the rate of interest, the investment will be made till the MEC and the rate of interest are equalized. For example, if the rate of interest 7%, the induced investment will continue to be made till the MEC and the rate of interest are equalized. At 7% rate of interest, the new investment will be $40 billion. In case, the rate of interest comes down to 2%, the new investment in capital assets will be $100 billion. Summing up, if investment is to be increased in the country, either the rate of interest should go down or MEC should increase.

Factors Affecting MEC:

The marginal efficiency of capital is influenced by short run as well as long run factors. These factors are now discussed in brief:

Short Run Factors

(i) Demand for the product. It the market for a particular good is expected to grow and its costs are likely to fall, the rate of return from investment will be high. If entrepreneurs expect a fall in demand of goods and a rise in cost, the will decline.

(ii) Liquid assets. If the entrepreneurs are holding large volume of working capital, they can take advantage of the investment opportunities that come in their way. The MEC will be high and vice versa.

(iii) Sudden changes in income. The MEC is also influenced by sudden changes in income of the entrepreneurs. If the business community gets windfall profits, or there are tax concession etc.,

the MEC will be high and hence investment in the country will go up. On the other hand, MEC falls with the decrease in income.

(iv) Current rate of investment. Another factor which influences MEC is the current date of investment in a particular industry. If in a particular industry, much investment has already taken place and the rate of investment currently going on in that industry is also very large, then the marginal efficiency of capital will be low.

(v) Wave of optimism and pessimism. The marginal efficiency of capital is also affected by waves of optimism and pessimism in the business circle. If businessmen are optimistic about future, the MEC will be overestimated. During periods of pessimism the MEC is under estimated.

Long Run Factors:

The long run factors which influence the marginal efficiency capital are as under:

(i) Rate of growth of population. Marginal efficiency of capital is also influenced by the rate of growth of population. If population is growing at a rapid speed, it is usually believed that at the demand of various classes of goods will increase. So a rapid rise in the growth of population will increase the marginal efficiency of capital and a slowing down in its rate of growth will discourage investment and thus reduce marginal efficiency of capital.

(ii) Technological development. If investment and technological development take place in the industry, the prospects of increase in the net yield brightens up. For example, the development of automobiles in the 20th century has greatly stimulated the rubber industry, the steel and oil industry, etc. So we can say that inventions and technological improvements encourage investment in various projects and increase marginal efficiency of capital.

(iii) The quantity of capital goods of relevant types already in existence. If the quantity of any particular of goods is available in abundance in the market and the consumers can partially or fully meet the demand, then it will not be advantageous to invest money in that particular project. So in such cases, the marginal efficiency of capital will be low.

(iv) Rate of taxes. Marginal efficiency of capital is directly influenced by the rate of taxes levied by the government on various commodities, When taxes are levied, the cost of commodities is

increased and the revenue is lowered. When profits are reduced, marginal efficiency of capital will naturally be affected. It will be low.