Sri Chandrasekharendra Saraswathi Viswa Maha Vidyalaya

Department of Computer Science and Engineering

CS8T1 - Engineering Economics and Management

Course Material

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UNIT-I

Nature of management and its process – Contribution of Taylor and Fayol to management – Functions and principles of management –Industrial ownership – Types, formation, merits and demerits – Management by objective , Management by exception.

Topics

- Nature of management and its process
- Functions and principles of management
- Contribution of Taylor and Fayol to management
- Industrial ownership- Types, formation, merits and demerits
- Management by objective
- Management by exception

AIM

Acquire knowledge of economics to facilitate the process of economic decision making. Acquire knowledge on basic financial management aspects. Develop the skills to analyze financial statements.

OBJECTIVES

This course introduces the basic concepts of management and organisation structure of an industry, concept of Entrepreneurship, Material management cost analysis, engineering economics and project management.

DEFINITION

Engineering Economics and Management highlights the importance of economics and management in engineering and helps engineers in managerial decision making. Engineering economics is closely associated with conventional microeconomics; but here, its focus is on problem solving at operational levels.

CHARACTERISTICS OF ENGINEERING ECONOMICS AND MANAGEMENT

1. Engineering Economics is closely aligned with Conventional Micro-Economics.
2. Engineering Economics is devoted to the problem solving and decision making at the operations level.
3. Engineering Economics can lead to sub-optimisation of conditions in which a solution satisfies tactical objectives at the expense of strategic effectiveness.
4. Engineering Economics is useful to identify alternative uses of limited resources and to select the preferred course of action.
5. Engineering Economics is pragmatic in nature. It removes complicated abstract issues of economic theory.
6. Engineering Economics mainly uses the body of economic concepts and principles.
7. Engineering Economics integrates economic theory with engineering practice.

INTRODUCTION

In the modern times one of the most important human activities is managing group of people. Ever since people began forming groups to accomplish aims they could not achieve as individuals, managing has been essential to ensure the coordination of individual efforts. As society has come to rely increasingly on group effort and as many organized groups have become large the task of managers has been rising in importance.

Management is the process of designing and maintaining an environment in which individuals working together in groups efficiently accomplish selected aims.

The basic definition of Management explain that

- ✧ As managers, people carry out the managerial functions of planning organizing, staffing, leading and controlling.
- ✧ Management applies to any kind of organization.
- ✧ It applies to managers at all organizational levels

- The aim at all managers is the same to create a surplus.
- Managing is concerned with productivity, which implies effectiveness and efficiency.

Thus it may be concluded that management plays a key role in improving standard of living of the people in the society through developing an ideal organizational structure and making economic use of available resources. The knowledge of management theory and practice enables managers to take more realistic view about organizational and social problems and to find out their effective solution.

VIEW OF MANAGEMENT

Management is an important factor for the success of any organized activity. Today management basically concern with changes and challenges, and it is difficult to manage.

Management is an art of getting things done through others.Management is to plan, organize, direct and control the resources of the organization for obtaining common objectives or goals. It is related with resources like material, money, machinery, methods, manufacturing and marketing.

Management principles are universal in nature. Management is necessary for all types of organization, such as public sector, private sector, govt. department, hotel, hospital, hostels, educational institutes, require management for several growth and expansion.

Definitions:

1) **According to Taylo**r:- "Management is the art of knowing what you want to do and then seeing that it is done in the best and cheapest way."

2) **According to Lawrence**:- "Management is the accomplishment of results through the efforts of other people."

3) **According to Henry Fayol**:- "To manage is to forecast and to plan, to organize, to co-ordinate and to control."

*TOPIC - 1*NATURE OF MANAGEMENT

- Management is an activity

- Management is a purposeful activity.
- Management is concerned with the efforts of a group Nature of Management
- Management applies economic principles.
- Management involves decision making.
- Management is getting things done through others.
- Management is an integrating process.
- Management co-ordinates all activities and resources.
- Management is a universal activity.
- Management is dynamic not rigid.

IMPORTANCE OF MANAGEMENT

1] **Management is goal oriented**:- Management is concern with achievement of specific goals. It is always directed towards achievement of objectives. The success of management is measured by the extent to which objectives are achieved.

2] **Management is associated with group efforts**:- The business comes into existence with certain objectives which are to be achieved by a group and not by one person alone. Management gets things done by, with and through the efforts of group members. It co-ordinates the activities and actions of its members towards a common goal.

3] **Management is intangible**:- It is an unseen force, its presence can be evidence by the result of its efforts up to date order but they generally remain unnoticed, Where as mismanagement is quickly noticed.

4] **Management is an activity and not a person or group of person:-** Management is not people or not a certain class but it is the activity, it is the process of planning, organizing, directing and controlling to achieve the objectives of the organization.

5] **Management is situational**:- Management does not advice best way of doing things. Effective management is always situational. A manager has to apply principles, approaches and techniques of management after taking into consideration the existing situations.

6] **Management is universal**:- Most of the principles and techniques of management are universal in nature. They can be applied to government organization, military, educational institutes, religious institutes etc. They provide working guidelines which can be adopted according to situations.

7] **Management is concern with people**:- Since management involves getting things done through others only human being performed this activity with the help of planning and control. The element man can not be separated from the management.

8] **Management is the combination of art, science and profession**:- Management makes use of science as well as art. It is science because it collects knowledge with the methods and data, analyzes and measures it and decision is taken with the help of experiment. It is a systematic body of knowledge. Art means application of knowledge for solving various problems. In modern times there is separation of ownership and management, so professional experts are appointed.

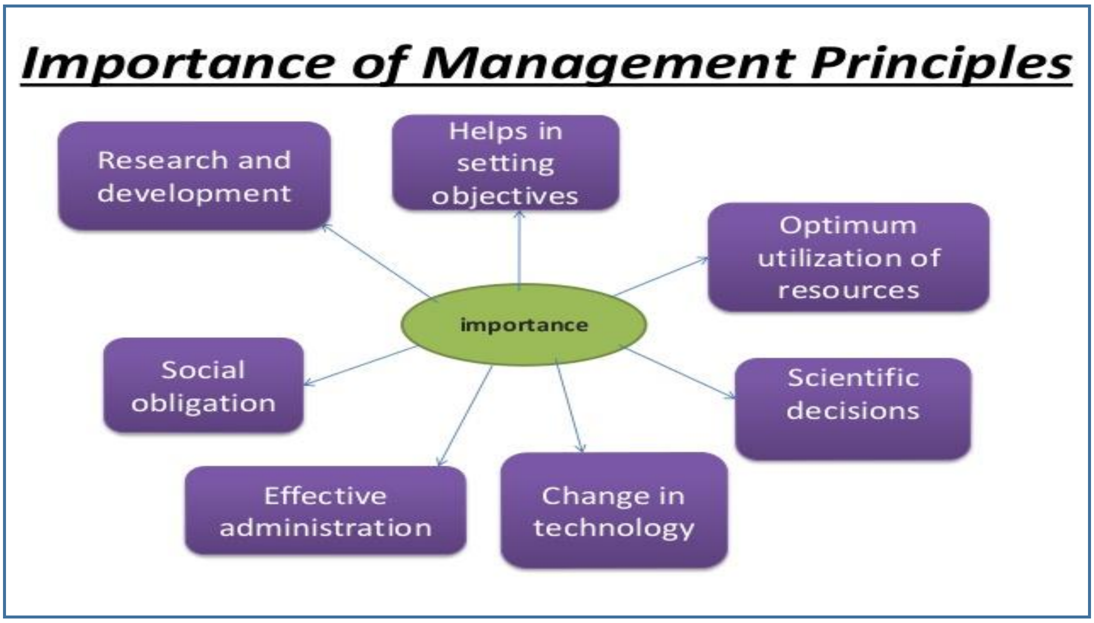


Fig:1 Importance of Management

TOPIC - 2 FUNCTIONS AND PRINCIPLES OF MANAGEMENT

The major functions of management are discussed below:

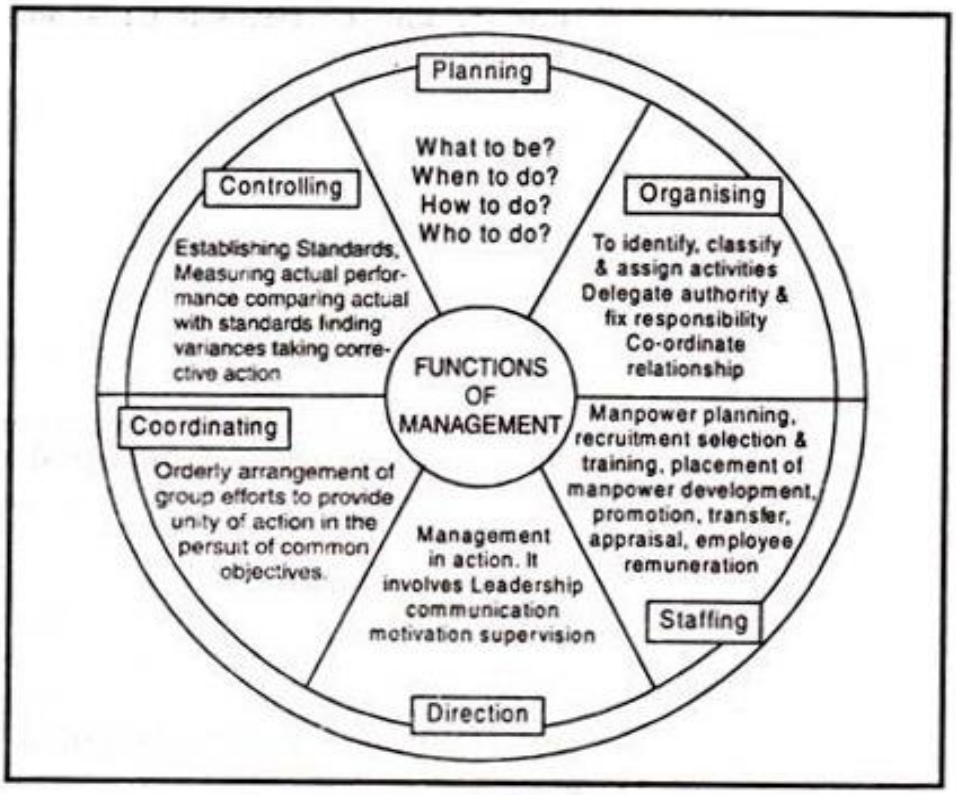


Fig:2 Illustration of examples for functions of Management

Planning : It includes forecasting, formation of objectives, policies, programmes, producer and budget. It is a function of determining the methods or path of obtaining there objectives. It determines in advance what should be done, why should be done, when, where, how should be done. This is done not only for organization as a whole but also for every division, section and department. Planning is thinking before doing.

Organizing:- It includes departmentation, delegation of authority, fixing of responsibility and establishment of relationship. It is a function of providing every thing useful to the business organization. There are certain resources which are mobilize i.e. man, machine, material, money, but still there are certain limitations on these resources. A manager has to design and develop a structure of various relations. This structure, results from identification and grouping work, delegation of authority and responsibility and establishing relationship**.**

Staffing:- It includes man power planning, recruitment, selection, placement and training. People are basically responsible for the progress of the organization. Right man should be employed for right job. It also involved training of personnel and proper remuneration.

Directing:- It includes decision making, supervising, guidance etc. It reflects providing dynamic leadership. When the manager performs these functions, he issues orders and instructions to supervisors. It also implies the creation of a favorable work, environment motivation, managing managers, managing workers and managing work environment.

Communication:- Communication provides the vital link in any organization. Every successful manager has to develop an effective system of communication. Communication means exchange of facts, ideas and information between two or more person. It helps in building up high moral.

Controlling:- It is a process of checking actual performance against standard performance. If there is any difference or deviation then these differences should be detected and necessary steps should be taken. It involves three elements:

1. Establishing standard of performance.
2. Measuring actual performance with establishment.
3. Finding out reasons for deviation.

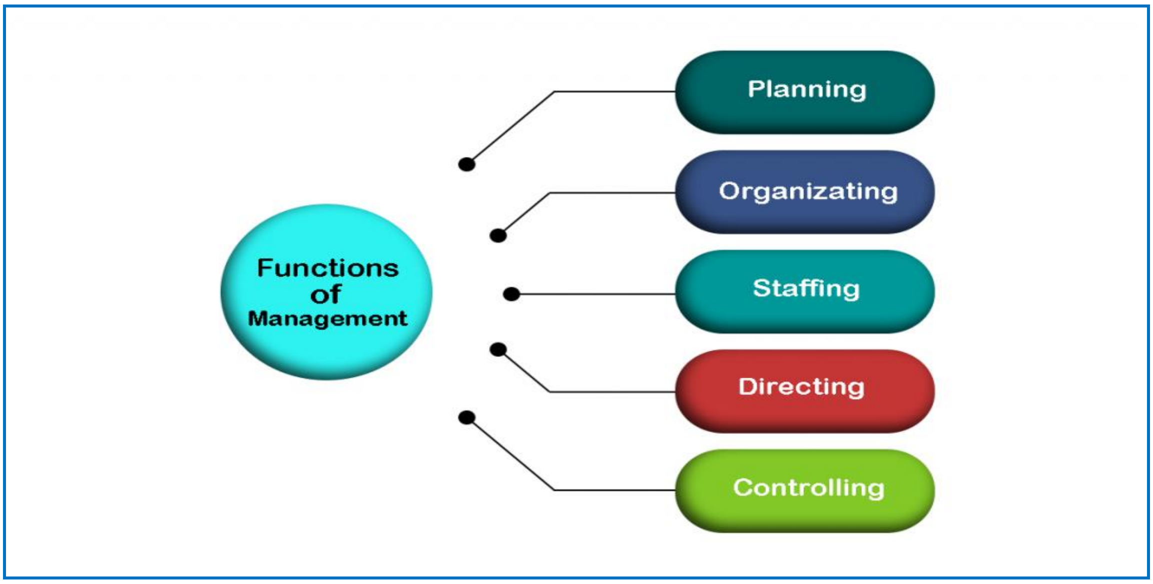


Fig:3 Types of Functions of Management

Management - Science or Art:

Science may be defined as a body of knowledge systematized through application of scientific method in any department of enquiry. Science include physical sciences which have exactness in their nature and also social sciences which is based on unpredictable human behaviour. Management can then be described as a variable growing science, if compared with the nature of exact physical science.

- ❖ Management is still a growing science.
- ❖ Management has now a theoretical base.

Features of Management as a Science:

1. Inexact science, deals with complex human behavior
2. Developing science.
3. Inter- Disciplinary Science-learns freely from other disciplines.

Management as an Art:

1. The function of art is to effect change or accomplish goals by deliberate efforts.
2. Practical application of theoretical knowledge is reflected in art. In this sense management is an art as well.
3. Management principles involves skills to work out situations. This element is so important for executives that some authorities regard management to be essentially an Art.

Features of Management as an Art:

1. Process involves use of know-how and skills.
2. Directed towards accomplishment of concrete results.
3. Creating productive situations needed for further improvement.
4. Personalised because every manager has his own approach to problems.
5. Science and Art are not mutual exclusive but are complimentary.

Theory and practice of management are mutually helpful, go side by side for the efficient functioning of the organisation. Thus, Science is a body of knowledge while art denotes the mode of practical application of knowledge hence not mutually exclusive.

TOPIC - 3 CONTRIBUTION OF TAYLOR AND FAYOL TO MANAGEMENT(SCIENTIFIC MANAGEMENT)

Scientific management is a part of early management approaches. The chief contributor of scientific management is F. W. Taylor. He is known as Father of Scientific Management (1856 to 1915) was born in USA.

He did most of his schooling in France & Germany. He couldn't finish his graduation & join Midvale Co. (Steel Work). He worked there for 6 years. In 1884 he raised to the position of Chief Engineers, as mean while he obtained Masters degree in Physics, Mathematics & Engineering.

In 1898, he joined Bethlehem Steel Co. where he did his experiment to increase the loading capacity of each worker with regards to material handling equipment. At first one worker was engaged in loading 12.5 tones of iron. But with the help of time & motion study he proved that one man can load 47.48 tones because of the change in the size of spade & systematic arrangement of instruments. With the help of proper planning organization can earn more profit. Initially the workers in that company are 500 to 600 because of this the strength of workers reduce to 140 and profit increased by 78,000 dollars.

Definition:- Scientific management is concern with exactly knowing what you want men to do & then see that they are doing in best & cheapest way.

Contribution of F. W. Taylor :-

1) At Midvale Steel Co. he improved proper distribution of work for each worker.
2) In Midvale Steel Co. he analyzed the work done by workers in specific job & allotted standard time.
3) He also made experiments on time study & motion study to decide the work load of each worker.
4) In Bethlehem Steel Co. he had made experiments with material handling equipment for increasing the capacity of each worker.
5) In 1901, he presented a paper on differential piece rate system.
6) In 1906, he published article on art of cutting metals.
7) In 1903, he presented important paper on shop management – In that he explained gang boss, speed boss, repair boss & inspector.

8) In 1911, he gave the principles of scientific management, for which he is remembered as ‘Father of Scientific Management’. In that he has explained:- i) Friendly relationship between workers & management. ii) Scientific education to the workers. iii) Scientific selection of workers so that each worker could be given responsibility for the task. iv) Development of the true science of management with proper analysis in the organization.

Mechanism:-

1. **Separation of Planning & Doing**:- Before Taylor’s scientific management a worker used to plan about his work & instruments necessary for that. Supervisors’ job was to see how the workers were performing. This creates a lot of problems. So Taylor has separated planning & doing authority.

2. **Functional Foremanship**:- Separation of planning from doing resulted into development of supervision system. In this system 8 persons were engaged, out of that 4 persons were engaged in planning department. They are time & cost clerk, routine clerk, instruction card clerk & disciplinarian. In production process 4 personnel were engaged, they are speed boss, repair boss, supervisor & gang boss.

3. **Job Analysis**:- It is related with finding out best way of doing. It means that least movements in doing job. It will lead to complete production in less time & lesser cost.

It includes:-

A) **Time Study**:- It means determining time required to complete a job in a particular time. The movement which takes minimum time is the best one.

B) **Motion study**:- It means study of movement while performing a job i.e. elimination of wasteful movement in performing a job, only necessary movements are engaged.

C) **Fatigue Study**:- It shows the amount & frequency of rest required, while completing the work. After certain period of time workers feel fatigue & can’t work with full capacity. Therefore they require rest in between. When rest is allowed they start working with full capacity.

D) **Standardization**:- As far as possible standardization should be maintained in respect of instruments & tools, period of work, amount of work, working conditions, cost of production etc. these all things are fixed in advance on the basis of job analysis.

E) **Scientific Selection & Training of Workers**:- Taylor has been suggested that worker should be selected on scientific basis taking into account their education, work experience, attitude & physical strength.

F) **Financial Incentives**:- Financial incentives help to motivate workers in maximum efforts. Higher wages lead to increase in efforts. He applied differential piece rate system. According to him workers have to complete the work within specified time and then only he will get wages at higher rate per piece & one does not complete a job gets a lower rate. Wages should be based on individual performance & not on the position occupied.

G) **Economy**:- Techniques of cost estimated & control should be adopted. Waste should be controlled properly. Profit will be achieved with elimination of wastage. He explained how resources are wasted.

H) **Mental Revolution**:- Scientific management depends upon mutual co-operation between workers & management. Taylor say's great revolution takes place in the mental attitude of two parties under scientific management. He has given systematic design of work. Labour management, co-operation required a complete mental change on the part of both parties. The workers have specific duties towards management & vice-a-versa. The method of scientific investigation & knowledge should be accepted by both parties.

Criticisms:-

In the beginning Taylor's scientific management was considered as something very unique. But after some time it was subjected to several criticism.

1) Taylor's scientific management was related to production management. It takes practical view of management & focuses attention only on the production management. Taylor's study of management has become the study of lower level management. He stressed on efficiency on lower level. He has neglected marketing, financial and decision making aspects completely.

2) Scientific management is applicable to large scale organization. It involves high expenditure. It is a luxury for small scale organization. It involves research, experiment & analysis. It is difficult for small scale organization.

3) It was also argued that devices of work analysis, time study & motion & fatigue study can't be applied in the practical life.

4) The idea of best way of doing a job was also criticized. Everyone has his own natural style of work & he can give best only if he is allowed to work in his style. The maximum efficiency will be attained by the group & not by individual worker.

5) Wages of workers are not increased in a direct proportion of productivity. It leads to exploitation to workers.

6) People are not ready to use the word 'scientific'. The scientific does not have any significance. Management is a social science and not an exact science.

TOPIC - 4 CONTRIBUTION OF HENRY FAYOL TO MANAGEMENT (ADMINISTRATIVE MANAGEMENT)

Definition of Management: Management can be viewed as an effort made for accomplishing the organizational goals, objectives and vision through planning, organizing, staffing, directing and controlling all the businessactivities accordingly. These principles set the guidelines and standardize the management's course of action to run a business organization effectively and efficiently.

Though these principles are not very appropriate for the modern business world, they have laid the foundation of business management.Also, they are studied and used by many researchers, experts and entrepreneurs, even today.

Fayol's major contribution was to identify management as a separate set of skills, or functions, performed by supervisors in organizations. He clearly delineated the difference between technical and managerial skills and noted that supervisor must be proficient in both to be successful.

Content: Henri Fayol's 14 Principles of Management

- What are the Principles of Management?
- Features of Principles of Management
- Administrative Management and Henri Fayol
- Fayol's 6 Activities of Industry
- Fayol's 6 Functions of Management
- 14 Principles of Management by Henri Fayol
- Limitations

What are the Principles of Management?

The principles of management refer to the fundamental truth which is generally applied to the everyday business operations for ensuring effective management of the organization.

Features of Principles of Management

The principles of management are identified facts which are developed through individual experiences and can be applied to all kinds of business entities. To know more about these principles, let us go through its following characteristics:

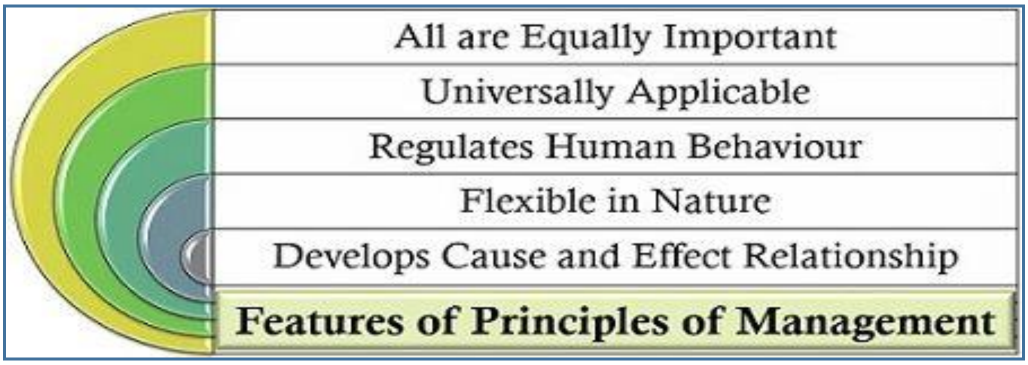


Fig:4 Depicting the Features of Principles of Management

- **All are Equally Important**: Every management principle holds equal importance in the business organization.

- **Universally Applicable**: These principles can be applied to any kind of organization, whether large or small or belongs to any industry.
- **Regulates Human Behaviour**: The application of the management principles helps the organization to monitor and control the behaviour of the personnel.
- **Flexible in Nature**: The applicability of these principles vary from organization to organization.
- **Develops Cause and Effect Relationship**: The principles of management establishes a relationship between every action and its consequences in the short and long run.

Administrative Management and Henri Fayol

The concept of the administrative management stating the 14 principles of management was given by Henry Fayol (1841-1925) in his book published in the year 1916 under the name 'General and Industrial Management'.

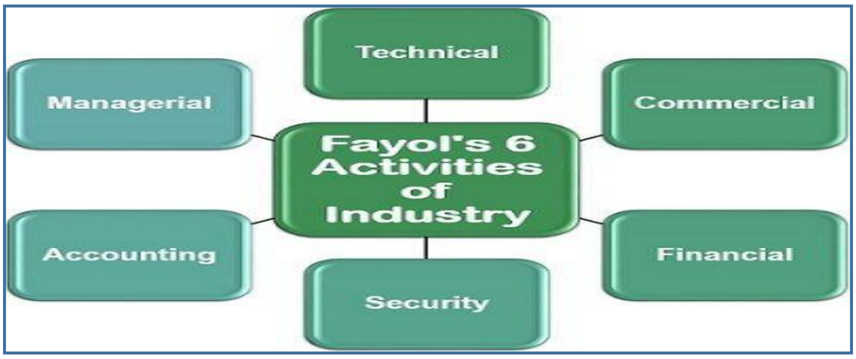
These principles have laid the foundation of what it is called modern management theory today. This theory is still applied by some of the famous companies like Apple, Google, Microsoft, etc. He is therefore known as the 'father of modern management theory'.

Fayol worked for an iron and coal company named, 'Commentry-Fourchambault' in France for 58 years, where he was a mining engineer in the initial years and lastly became the CEO of the company.He gained ample understanding of the problems at all levels of the organization during his growth tenure.Thus, through all his experience and learning, he developed the 14 principles for superior management of any organization.

Henry Fayol has himself followed these principles throughout his management career. Therefore, his motive was to provide a guideline to all the other managers for the efficient management of their organizations.

Fayol's 6 Activities of Industry

In his concept of administrative management, Fayol stated that there are six significant activities which are performed in every type of organization. These activities comprise of:

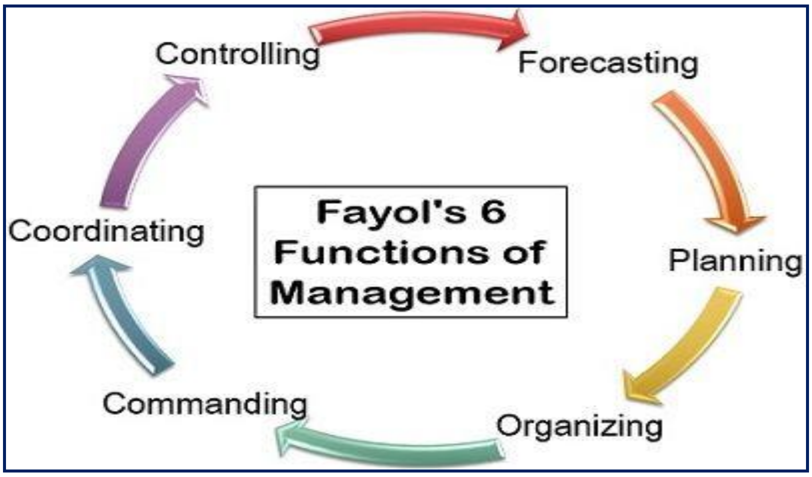


are performed in every type of organization. These activities comprise of:

- **Technical**: The technical part includes product or process engineering and production of goods or services.
- **Commercial**: All the marketing functions, including procurement, sales, distribution and promotion, are a part of commercial activity.
- **Financial**: The financial activity consists of the acquisition of capital and its management.
- **Security**: The protection and safety of the resources, i.e., personnel, capital and assets, comes under security.
- **Accounting**: The accounting activity comprises of bookkeeping, record maintenance, reporting, cost accounting, inventory management, etc.
- **Managerial**: Managerial activity includes the various functions of management, i.e., planning, organizing, commanding, coordinating and controlling of the business operations.

Fayol's 6 Functions of Management

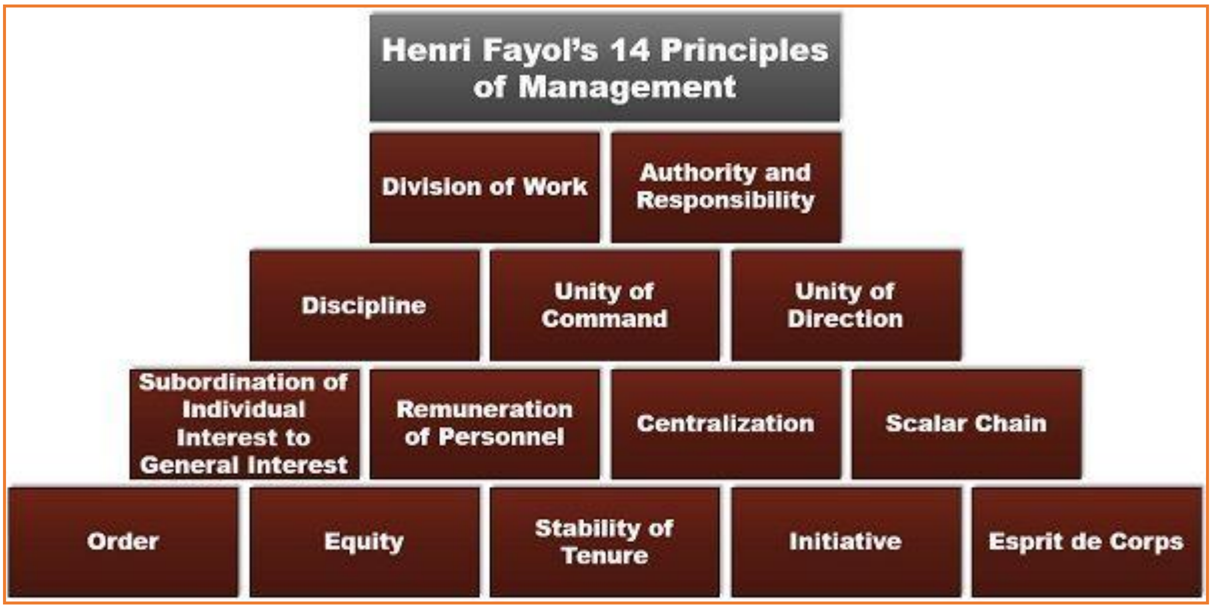
Henry Fayol gave six managerial functions, which are performed in almost every organization. Therefore we can say that these functions are universally applicable. Let us now understand each of these in detail below:



- **Forecasting**: The first function is to analyze the present and past information to predict the future and plan accordingly.
- **Planning**: The top management plans a suitable course of action, based on the business forecast.
- **Organizing**: The management next needs to systematically arrange the resources, i.e., raw material, capital and human resource as per the planning.
- **Commanding**: The managers give instructions, directions and orders to the subordinates in this function.
- **Coordinating**: In this function, the management should ensure proper synchronization among all the departments. For this purpose, weekly meetings can be held with the managers of all the departments.
- **Controlling**: The managers need to evaluate the performance of the personnel by establishing the standards, comparing the actual performance with the desired one and implement the corrective measures accordingly.

14 Principles of Management by Henri Fayol

The term 'principles of management' sounds quite complicated; however, it is merely a set of fundamental truth for effectively and efficiently managing any business organization.Fayol developed these principles on the grounds of his findings and experience, which he gained throughout his journey in an iron and coal company.We will now learn about each of these 14 principles in thefollowing description:



Division of Work

The first principle emphasizes on dividing the work into smaller tasks which can be equally allotted to individual employees based on their ability, skills and specialization. This is to enhance their overall efficiency in performing their respective duties.

Authority and Responsibility

Giving of responsibility is always accompanied by the delegation of a certain level of authority to fulfil the given task efficiently.

Responsibility without authority may result in improper utilization of the provided resources or delay in task accomplishment. Whereas, power without responsibility may result in reckless attitude and poor leadership.

Discipline

The management must ensure that employees abide by the rules, norms, principles and policies of the organization to maintain a disciplined work environment.

The managers can adopt the techniques of motivation and penalty (in case of non-compliance) for this purpose.

Unity of Command

This principle states that every employee should be headed by only one manager and not by two or three senior authorities.

It creates a lot of confusion for the employee and may lead to conflict among the instructing supervisors or managers.

Unity of Direction

The efforts and individual objectives of all the employees performing various tasks should be directed towards the attainment of the organizational goals as an ultimate aim.

Subordination of Individual Interest to General Interest

The management should understand the individual objectives of each employee so that these personal interest of the employees can be aligned with the organizational interest or purpose.

This principle says that the organization’s goal is superior to the individual aim of the employees.

Remuneration of Personnel

The remuneration policy (i.e., payment of wages and salary) of the employer should be fair enough. This is to ensure employee satisfaction, and it should either match or exceed the remuneration provided by the competitors.

Centralization

The level to which the authority of decision-making is delegated to the subordinates depends upon the organization’s size, type, nature and situation.

Usually, the large companies require decentralization; however, small firms may carry on with a centralized approach.

Scalar Chain

The organizational structure should be such that the employees can follow a clear hierarchy. Thus, everyone knows to whom they are accountable and, a smooth flow of information can be maintained from top to bottom level and vice-versa.

However, in case of an emergency or situation demanding quick decision-making, this concept may create a hurdle.

Therefore, for such circumstances, Fayol has given the idea of 'gangplank'. That is, an employee at any level can break the scalar chain and communicate with the other employee belonging to any authority level.

Order

Here, order refers to organizing everything (i.e., all the resources) in a systematic and planned manner.

In short, every object should have a pre-decided place, and every employee must be placed in the right role or job position.

Equity

According to Fayol, the management should never discriminate between the employees and treat them as equal in all respect.

If the organization is impartial towards its staff, they too tend to develop trust and belongingness towards the company.

Stability of Tenure

This principle is related to the retention and attrition of employees.

The growth of any business depends upon its ability to retain its employees for a long-term since recruitment, selection and training of new personnel involves enormous cost and time.

Initiative

The organization must encourage and inspire its employees to give their input and take the initiative in the execution of the planned activity.

It not only brings out innovative and creative ideas but also motivates the employees to perform their best.

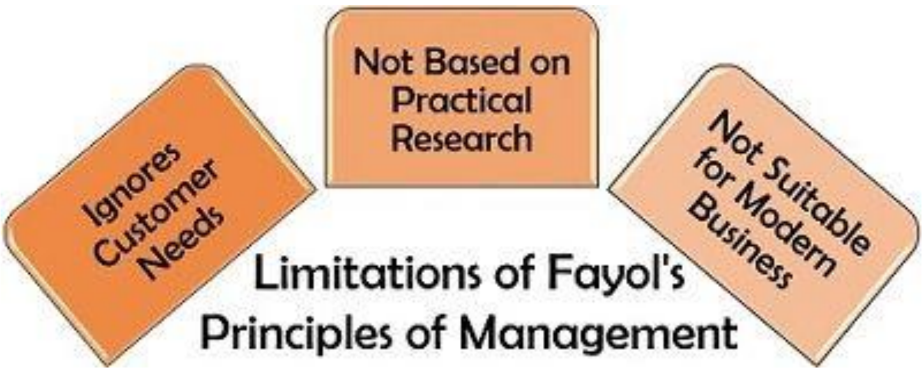
Esprit de Corps

Teamwork is an essential part of any business, and therefore, the organization should ensure that there is a cordial relation among the employees.

It develops a unity, team spirit, loyalty, mutual understanding and positive work environment in the organization.

Limitations of Fayol's Principles of Management

Later on, Fayol's 14 principles of management were criticized by many management critics. To know the reasons for this criticism, read below:



Fayol's principles revolve around catering to the needs of the organization; however, customer needs and demand are entirely ignored in this approach.

These principles are not based on practical research; instead, Fayol gave this concept as per his personal experience.

The 14 principles of management were developed in the period 1900s when the business scenario was very different from today. Therefore these are not exactly suitable for the present era and needs modification.

TOPIC - 4 INDUSTRIAL OWNERSHIP - TYPES, FORMATION, MERITS AND DEMERITS

The terms **industrial ownership**, business organization, forms of ownership of industry, types of business enterprise, types of ownership etc convey the same meaning. To start a business enterprise the most important thing required is capital.

Little capital is provided by single individual it is known as individual ownership, individual entrepreneur organization, single ownership, individual proprietorship etc.

- If the capital is provided by two or more persons, it refers to partnership organization.
- If the capital is provided by many persons in the form of shares to an institute with a legal entity it is called a joint stock company

There are other forms of organizations also. But they are manifestations of the three types mentioned above.

Types of ownership

The different types of ownerships are

- Single ownership (Individual or Sole proprietorship)
- Partnership
- Joint stock companies
- Corporations
- Cooperatives
- State or central government owned enterprises

Single ownership:

One man owns this type of business. The business man invests capital, employs labour and machines. For example 1. Retail-shops. 2. Workshops etc. The single owner invests, maintains and controls the entire business. Hence all gains or loss from business goes to him. It should be noted that he is fully liable for all the debts associated with the business. This type of ownership is easy to establish and simple to run with a minimum of legal restrictions.

Advantages:

- Easy formation: It is very easy to bring the business to existence
- Prompt decision making: Owner is prompt in decision making since there is to be consulted
- Operational flexibility: The organization is easy to operate and it is extremely flexible
- Maintains secrecy: secrecy in business can be maintained by the owner.
- Easy to dissolve: The business can be dissolved at any time
- No coordination. There is no problem of coordination in the organization
- Coordination of effort and reward: efforts and rewards are directly related in this type of ownership

Disadvantages:

- Limited Capital: The amount of capital that can be invested will normally be very limited
- Owner is not a Master of All: The owner of the business cannot be a master of all techniques, like management, sales and engineering etc.
- Expanding Business is difficult: It will be difficult to raise capital in order to expand the business
- Sole Responsibility: The owner is liable fore all obligations and debts of the business.

- Limited opportunities for employees: There will be limited opportunities for employees to get profit sharing, bonus etc.
- Limited Life: The firm ceases to exist with the death of the owner
- Unlimited Liability: When the business fails, the creditors take away the personal property as well as business property to settle their claims.

Partnership

- Partnership has been defined by the **Indian partnership act 1932** as the relationship between persons who have agreed to share profit of a business concern carried on by all or any one of them acting for all.
- When 2 and up to 20 persons in the case of non - banking business and up to 10 in case of banking business enter into a contract to carry on a business allowed by law, with the object of making profit, a partnership is said to be formed.
- It should be noted that every partner is liable and responsible for the acts of other partners in that business. To avoid complications at later stages. the constitution of partnership is written in an agreement form. The partnership is usually optimal if the numbers of partners are less than 6. Lesser is always better.
- Usually persons with good ideas and experience in running a business make partnership with people who are financially sound. Thus both money and knowledge are brought together to earn profit
- Partnership comes into existence by means of an agreement. This written agreement is called a partnership deed.

Advantages of Partnership:

Easy formation: Formation involves less legal formalities. Registration expenditure and stamp duty are considerably less.

- Limited government restrictions: this kind of ownership is not subjected to strict government supervision. Hence, it enjoys more freedom
- More capital: More capital can be raised in comparison with sole proprietorship
- Knowledge or skill: As the abilities and skills of each partner are different, more knowledge is available to run the business.

- Success pays; success of partnership pays high incentive
- Legal status: there is a legal status for the firm and it can borrow money quiet easily from banks.
- Tax advantages: Partnership has **tax advantages** with it. As the total income is divided among partners. Each partner is assessed separately for income tax
- Losses are shared: for all losses, there is more than one person to share it.
- Consent of all: no major decisions can be taken without the consent of all partners.

Disadvantages of partnership

Unlimited liability: Each partner has unlimited liability, therefore risk involved is more.

- Limited period of existence after the death or retirement of any partners the partnership comes to an end.
- Limited partners means limited money: As there is a legal ceiling with respect to the number of partners, the total money that can be raised is limited when compared to a joint stock company
- Unstable: If anything happens to a partner, the partnership comes to a halt. Hence, partnership is unstable.
- Misunderstanding: Misunderstanding and friction are common among partners and this affects partnership.
- Mistakes affects all partners; Any mistake of a partner leads to a loss for all the partners
- Lack of public confidence: Partnership usually does not enjoy public confidence as it lacks proper publicity of its affairs.

Joint Stock Company

A joint stock company is an association of individuals, called shareholders, who join together for and agree to supply capital divided into shares that are transferable for carrying on a specific business other than banking business A joint stock company consists of more than 20 persons for carrying any business other than the banking business.

There are two types of joint stock companies

1. Private limited company
2. Public limited company

A) Private limited company

The capital is collected from private partners; some of them may be active while others may be sleeping

- Private limited company restricts the right to transfer shares; avoids public to take shares or debentures.
- The number of members is between 2 and 50, excluding employees and ex-employee share holders.
- The company need not file document such as consent of directors, list of directors etc with the Registrar of Joint Stock companies
- The company need not obtain from the Registrar, a certificate of commencement of business.
- The company need not circulate the Balance Sheet, profit or loss account
- A private company must get its account audited.
- A private company has to send certificate along with annual returns to the Registrar of Joint stock companies stating that it does not have shareholders more than 50 excluding the employees and ex employee share holders.

B) **Public Limited Company:**

In public limited company, the capital is collected from the public by issuing shares having small face value. (Rs .50, 20,100)

- The number of shareholders should not be less than seven but there is no limit to their maximum number
- A public limited company has to file with the Registrar of joint Stock companies, documents such as consent of directors, list of director directors contract etc. along with memorandum of association of articles.
- A public company has to issue a prospectus to the public
- It has to allot shares within 180 days from the date of prospectus.

- It can start only after receiving the certificate to commence business
- It has to hold statutory meeting and to issue a statutory report to all members and also to the registrar within a certain period.
- There is no restriction on the transfer of shares.
- Directors of the company are subject to rotation.
- The public company must get the account audited every year

Memorandum of Association

This is the main document of a company which defines its objective and lays down its fundamental conditions as per which the company is allowed to be formed.. It is the character of the company. The company cannot act outside the scope of the powers given to it by the **memorandum**. It gives information to the shareholders, creditors etc regarding the permitted range of activities of the enterprise, it cannot be changed except by following all the prescribed procedures.

Liquidation:

If liabilities of the company become much more than the assets and when creditors press for the payment of loans it becomes difficult to run the company. At this time the company has to dissolve and this is known as liquidation .Liquidation may be voluntary or compulsory or under the supervision of the court the resources available do not permit the payment, the assets of the company are sold and the amount left after the payment is distributed among the shareholders.

Public Sector

The industrial revolution gave birth to private capitalism. Since consumers and workers were exploited there arose the need for state intervention in the industrial field. This intervention led to the evolution of public sector or public enterprise. in India prior to independence there no public sector barring the field of transport and communication. Railways, Post and telegraph etc were managed by central government since pre independence period .Since independence a large number of public enterprises have been established by both central and state government. The Hindustan ship yard, the Hindustan steels, Hindustan Machine tools Bharat Heavy Electricals Indian Telephone Industries; Indian airlines Life Insurance Corporation of India etc are few examples of Public Sector.

A public sector enterprise is one that is owned by the state or managed by the state or owned and managed by the state. Public sector enterprises are controlled and operated by the state to producer and supply the goods and services required by the society. Unlimited control of public enterprises remains with the state and the state runs it with a service motto. But a public enterprise is seldom as efficient as a private enterprise. Waste and inefficiency are very common with public enterprises

Corporations

A corporation is very similar to a joint stock company. They are brought into existence by state or central government by special law of the country defining the powers, functions and forms of management and relationship to other government departments. Corporations are fully owned by the Government and are financially self supporting .Chief executive members of the board are nominated by the government. Corporations are formed due to the changed industrial policy of India in April 1948. The manufacture of arms and ammunitions, atomic energy, railway services post and telegraph, iron and steel production, aircraft manufacturing ship building etc. have fully come under Government control and ownership.

Types of Corporations

- Government departments: Railways, defense, post and telegraph dooradarshan etc.
- Public Corporations: LIC of India, state power corporations, Indian airlines, State Road transport corporations etc.
- Government companies. HMT, BHEL, Hindustan Steel Etc.

Advantages:

It is an autonomous body and therefore it has the freedom of finance, management and flexibility of operation.

- Enjoys prompt attention and quick decisions as red tape and bureaucracy of departmental organization are avoided
- Ministerial directions and control ensures that the corporation is not run against public interest.
- Financial autonomy enables the firm to raise the required funds economically and conveniently

Disadvantages:

- Autonomy and flexibility are only in name sake as ministers and politicians often interferer in the day today functioning of the organization
- As the chief officers are from the government they do not take much interest in improving the functioning of the enterprise.

Cooperative societies:

This is the most democratic form of business organization for the betterment of the general public. These cooperative societies help to protect the interest of the customers, small and independent producers and of the workers while fighting against monopolists and capitalists. The members of society supply the capital through shares; they manage the business and share the profit or loss.
The forms of cooperative societies are listed below.

- Customer cooperative societies: Its main objective is to eliminate the middleman's profit by directly purchasing things at cheaper rate and then distributing among the members at reasonable price
- Producers' Cooperative society: This is a society for manufactured goods .The society supplies raw materials tools and other things to the producers and takes up the output for sale and for the distribution among the members
- Marketing Cooperative society: These are voluntary organizations of independent producers organizes for the purpose of arranging for the sale of their output.

- Housing Cooperative societies: These are association of persons who are interested in securing the ownership of the house of obtaining accommodation at a reasonable rate.
- Credit Cooperative societies: These are voluntary associations of people with an objective of extending short term loans and habit of saving among them. The funds of these societies consist of share capital contributed by members.

Joint sector

Management is a big head ache in case of a government organization. Industrial unrest, strikes and lockouts are the outcome s of ineffective management. Joint sector concept is one means to overcome these difficulties
Joint sector means participation of both the government and private industry with respect to the share capital and management of the unit.

- Joint sector aims at achieving optimal use of the resources .the government finances and the private enterprises maintains the effective working of the industry. Ex. Indian Oil Company.
- The share capital is usually in the ratio of 51:49 and in all cases the government holds
  51% of the shares.
- In this set up government nominates the chairman but the managing director is from the collaborating private industry.

Efficiency cannot exist without structure.Without structure, businesses would struggle to reach that well-oiled machine status every company strives to obtain.

In business, this structure comes from ownership style. Because no business is exactly the same, there are different types of business ownership, all with different traits that make them suited for some companies and wrong for others.

What are the types of business ownership?

1. Sole proprietorship

2. Partnership
3. Limited liability company
4. Corporation
5. Cooperative

Choosing a business ownership style, also known as a business structure, is a necessary step when starting a small business or when reworking your current business plan.

Common types of business ownership

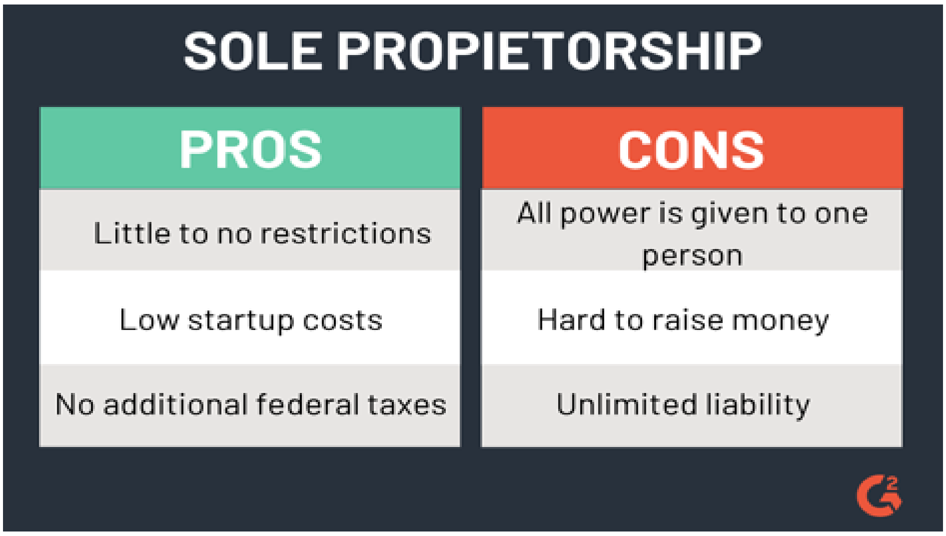
Let's take a look at the types of business ownership, along with some pros and cons, to help you figure out which one best fits your ideal structure.

1. Sole proprietorship

A sole proprietorship occurs when someone does business activities but doesn't register as another kind of business. There is no separate business entity, meaning there is no distinction between the business owner's personal and professional assets and liabilities.

Sole proprietorships are simple, easy to start, and one of the most common types of business ownership. They are a good option for someone starting a low-risk business on a trial basis. Also, no additional taxation!

However, because there is no formal separation, the business owner will become personally liable for any obligation the business might have.



2. Partnership

Similar to sole proprietorships, a partnership is the simplest type of business ownership when two or more people are involved. There are two kinds: limited partnerships and limited liability partnerships.

This term liability is being thrown around quite a bit, so let’s define the types of liabilities we will be looking at when discussing business ownership:

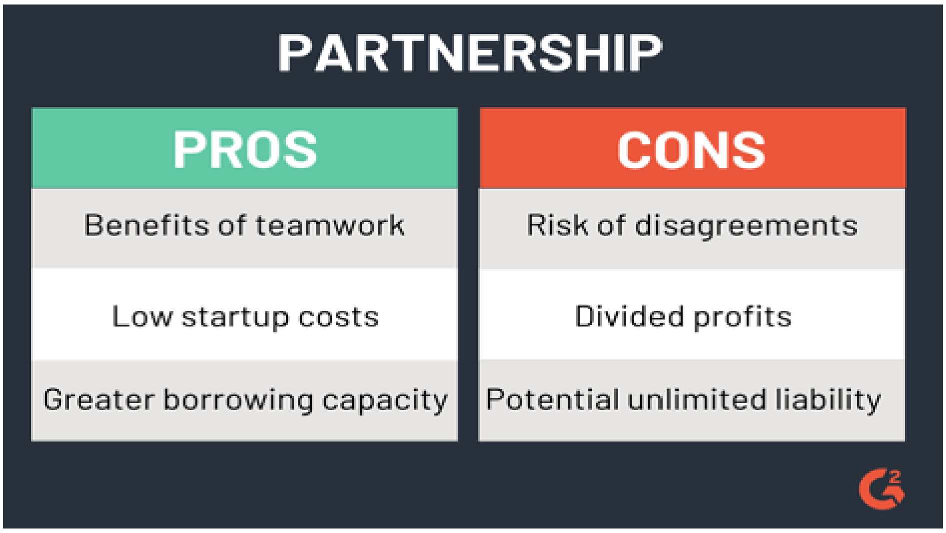
Liability: being responsible for something by law

Limited liability: a person’s liability is limited to a fixed sum, which usually reflects their investment in the business

Unlimited liability: there is no limit to the liability and the owners take full responsibility for the companies’ debts

A limited partnership has one partner with unlimited liability while everyone else involved has limited liability. With limited liability, comes limited control. Since being a partner with limited liability is less of a risk, they get less say in decision-making processes.

A limited liability partnership has only one class of owners, meaning there is no partner with the risk, and power, of unlimited liability. A limited liability partnership shares the liability among the owners, protecting them from the mistakes of their partners.Neither of these partnership types pays additional taxes.

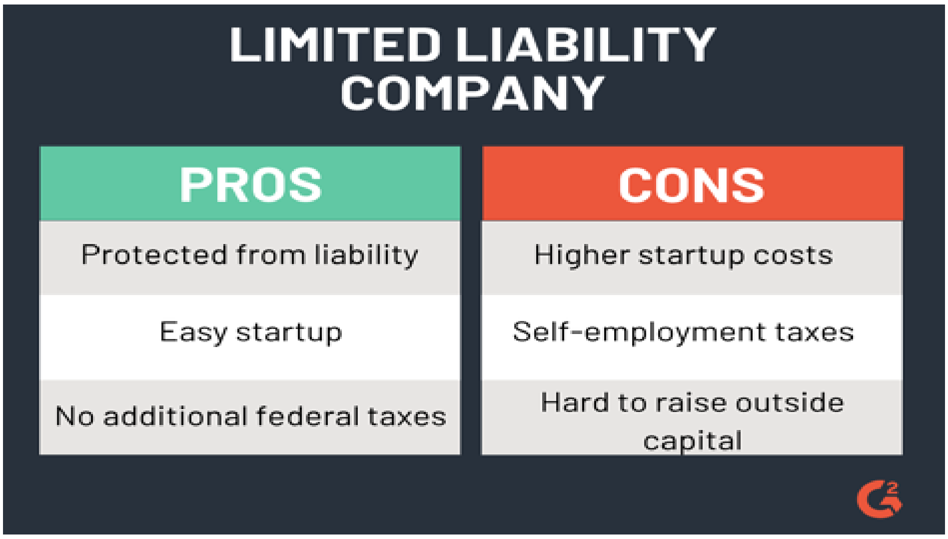


3. Limited liability company

Not to be confused with a limited liability *partnership*, a limited liability *company* (LLC) separates the owner's personal and professional assets. Meaning if your business gets hit with a lawsuit or goes bankrupt, your house, car, and personal piggy bank are safe.

Similar to sole proprietorships and partnerships, LLCs do not pay additional federal income taxes or those associated with being a corporation. However, depending on their location, they might be subject to other state taxes. Also, LLCs fall under the category of self-employment, so those taxes fall on them as well.

An LLC is a good choice for a business owner willing to take a little bit of a bigger risk or one looking to protect their personal assets.



4. Corporations

There are actually a few separate types of corporations, and each one has something that makes it a little different.

C corporation

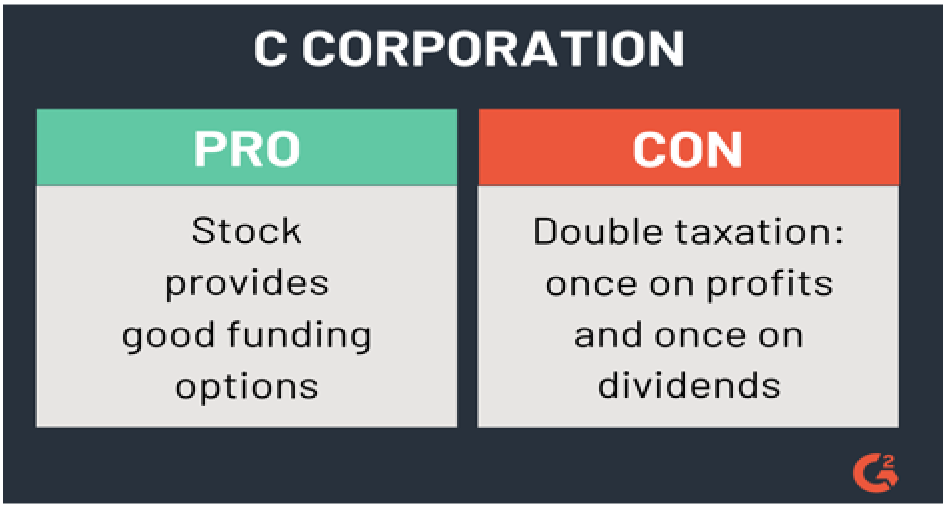
A C corporation, or just a regular corporation, is its own entity kept separate from its owners. This means they offer the most protection in terms of personal liability.

Corporations have an advantage when it comes to funding: stock. A stock is a partial share in a company, so when people buy stock, they are essentially buying ownership and decision-making responsibilities.

However, starting a corporation costs more than any other business structure. Not only are they legally required to do keep more records and release more reports, but they also pay income tax. In some cases, there is even double taxation - once on profits, and then again on the dividends distributed to stockholders.

With so many different stakeholders contributing to the same business, corporations become solid. If someone leaves, the business remains relatively unaffected.

A corporation is a good structure for a business owner looking for a little more risk, good funding options, and the prospect of eventually "going public," which means the company will eventually sell stock to the public.



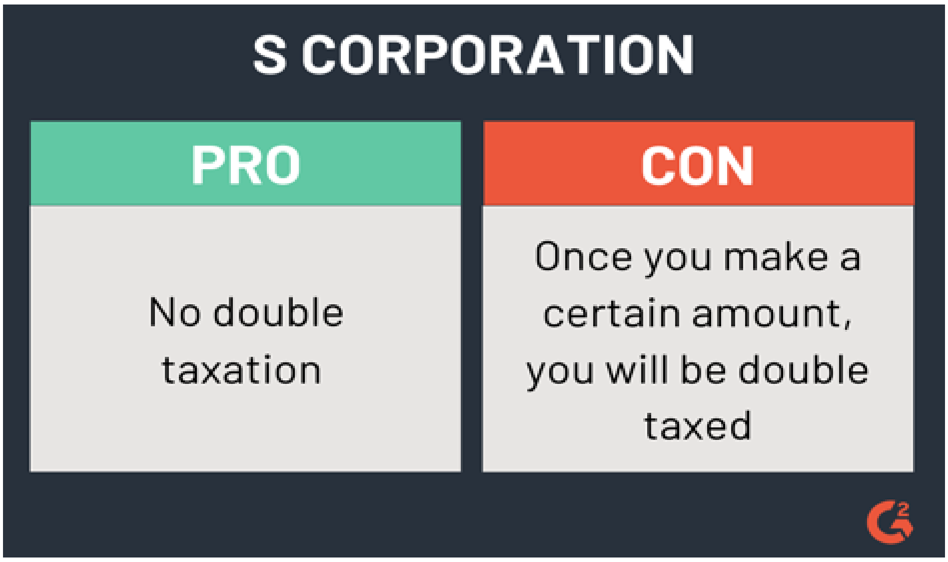
S corporation

An S corporation, or S corp, is a type of corporation that is meant to avoid the double taxation that hits normal C corporations.

To become an S corp and avoid that taxation, you file a special election. Once the business is officially an S corp, it is no longer taxed on profits. Instead, all profits, and losses, are passed on to the stockholders.

However, this is not possible everywhere. There are certain states that tax above a certain limit and some just tax them like a C corp.

Becoming an S corp isn't possible for everyone. If you have more than 100 stakeholders and any stakeholders that aren't citizens of the United States, you are out of luck. You can find other S corp criteria.

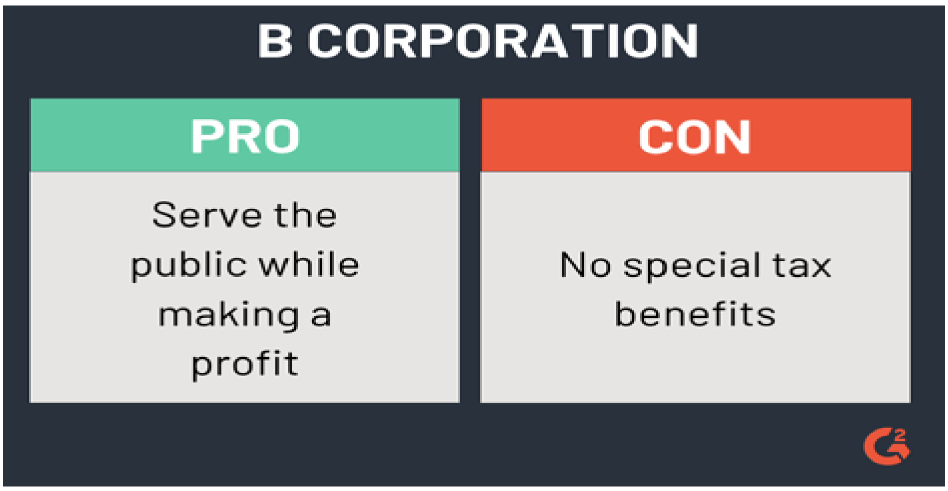


B corporation

Benefit corporations, or B corps, have missions similar to non-profit organizations, but they are, in fact, a for-profit corporation. Their stakeholders have the goal of providing a public benefit, but they also want to see a profit.

Certain state governments also want to see that public benefit; some require B corps to submit benefit reports that prove they are contributing to the good of the public.

Even though they might have different purposes, B corps are not taxed differently form C corps.

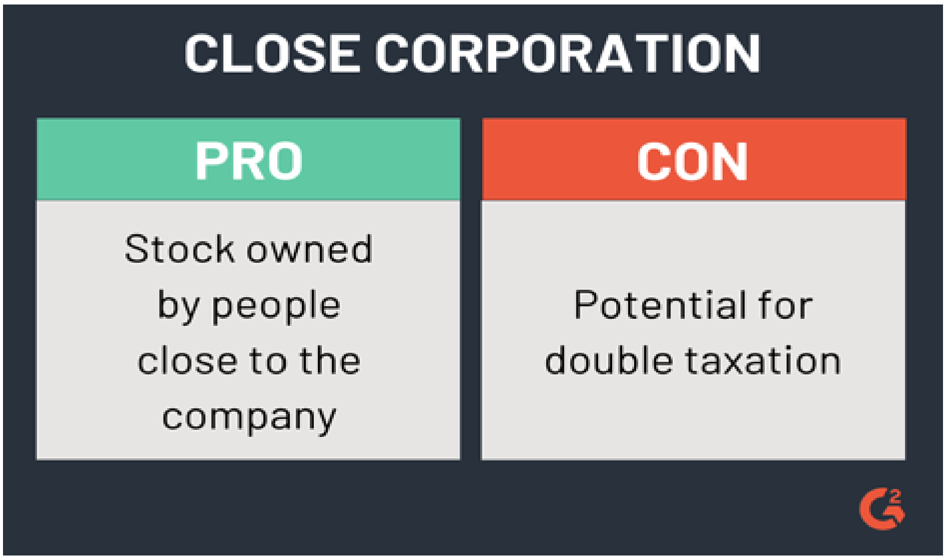


Close corporation

A close corporation resembles the structure of a B corp. A lot of the rules associated with smaller companies also apply to close corporations.

With other types of corporations, anyone can own stock. If there is stock available and they have the money, it's theirs. This is where close corporations differ: the stocks are owned by people that are closely related to the business.

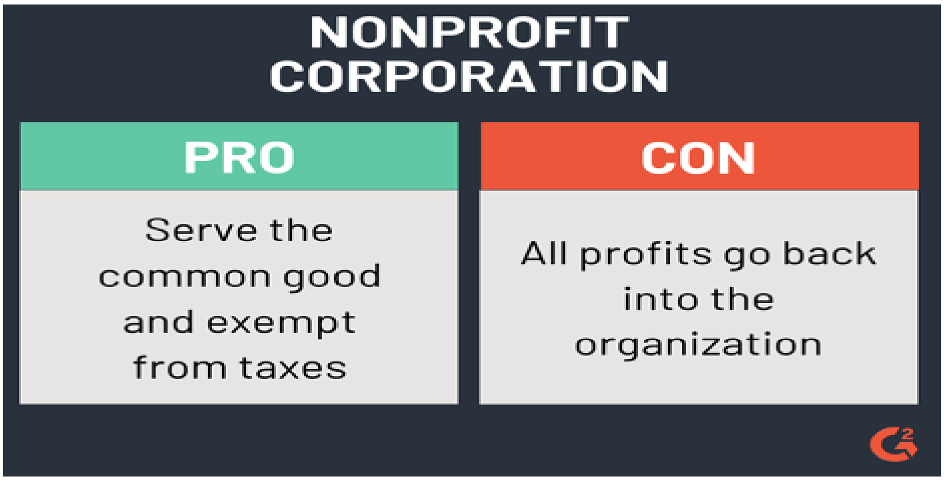
Stockholders in close corporations benefit from liability protection while also being free of reporting requirements and pressure from shareholders that don't know much about the business.



You don't want to mess with taxes. Make sure you are on the right track with sales tax compliance software.

Nonprofit Corporation

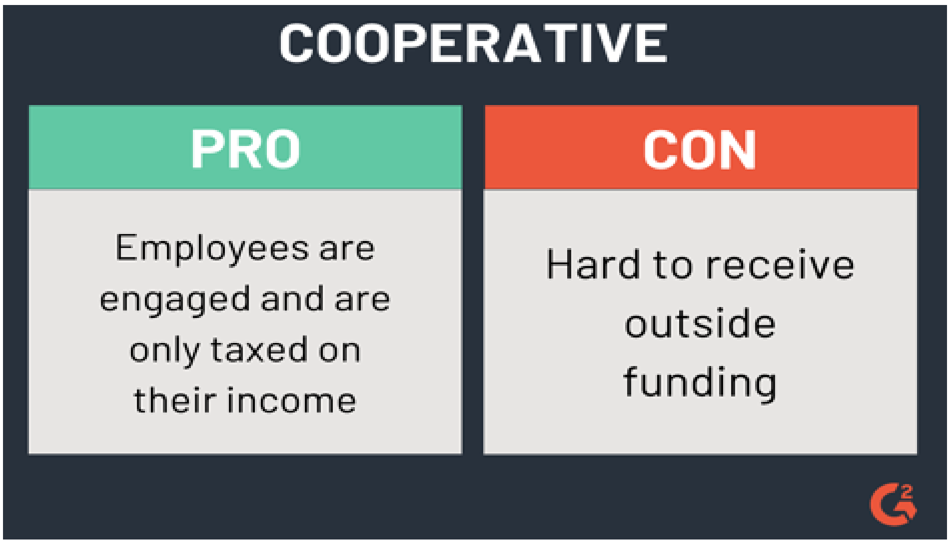
Nonprofit corporations work in charity, education, religion, literature, or science. Because they exist to serve the common good, nonprofit corporations do not pay any state or federal taxes on their income.To obtain this tax-exempt status, nonprofit corporations must register with their state, follow similar rules to standard C corporations, and all money must go back into the organization. In other words, profits can't be distributed to the members of the organization. This does not mean nonprofits do not pay their employees.



5. Cooperative

A cooperative is a private business owned and operated by the same people that use its products and or services. The purpose of a cooperative is to fulfill the needs of the people running it. The profits are distributed among the people working within the cooperative, also known as user-owners.

There is typically an elected board that runs the cooperative, and members can buy shares to be apart of decision-making processes.



Own it

Choosing the right business ownership style is an important and scary step for any burgeoning entrepreneur. There are a lot of solid options, all with compelling benefits and worrisome hindrances. Educate yourself on the myriad types of business ownership before making your decision.

APPLICATION - 1

Companies like Bharati Enterprises, Bata Shoe Company, House of Khodays etc.

(i) Public Limited Company:- A private limited Company is formed where the capital is collected from general public by issuing Shares usually having a face value like Rs.10, 20, 50,100. The minimum number of persons required to form a public limited company is 7 but but there is no limit. Companies can advertise and attract the general public to buy its shares which are transferable and can be sold to anybody at any price without any price approval. The affairs of the company are managed by a group of members called.

❖ Board of directors who are elected by the shareholders. One of the directors usually is selected as the Managing directors who has enormous powers to been the company, but is answerable to the Board of Directors. The board of directors formulates the plans and policies of the company, takes for reaching decision and generally adviser the Managing director on the administrative aspects of the company. The managing director implements these plans and policies and is in charge of the major activities of the company like production, planning and sales. He is responsible for the smooth functioning of the company.

Advantages

** Large amount of capital can be raised.

** Shares are transferable.

** Shareholders liability is limited to the shares they hold.

** It create huge employment possibilities.

** Risks of losses are spread out to many shareholders.

** Share holders are protected by Government restriction on the company on the company.

** Business can be run efficiently by employing professionals.

Disadvantages

** A great deal of legal formalities are required to start the company.

** Some decisions may be delayed because they have to be approved by the Board of directors who do not meet very often.

** Labour related problems are difficult to solve.

** It is difficult to maintain secrets of business.

** The directors may select their own men for high posts and build up their power.

APPLICATION-2

Companies like infosys, TISCO, L & T, Hindustan lever, Reliance are all public limited companies.

Comparison between private and public limited companies

Particulars Private Ltd., Company Public limited Company

Membership Confined to close friends Open to general public

Limits to membership Minimum : 2

Maximum : 50 Minimum : 7

Maximum : No limit

Election of director No need of statutory meeting Statutory meeting

Transfer of shares Cannot be sold Can be resold

Minimum capital Can be started with any current Minimum working capital has to be showed before starting business

Number of directors Minimum : 2 Minimum : 3

Public Sector

If public sector organisation is one which is owned and managed by the state or central government. In some cases the public sector enterprises are also controlled and operated in association with private enterprises. But the ultimate control remains with the government.

Types of government owned or public sector organizations

(i) **Government departments:**

These are wholly owned and managed by the State or Central Governments and generally provide service to the nation in various areas. They come under their respective ministries.

eg: Indian railways, P & T, JSRO, BARC, et.

(ii) **Government industries**:

These are wholly managed and owned by the State or Central Governments but are in the manufacturing sector. They generally manufacture and supply products to the various government owned organisations like Indian Railways, Indian Navy, KEB, Indian Army etc.

(iii) **Public Sector undertakings:**

Public sector undertakings are those industries which are jointly owned by the Central Government and State Government. Normally the majority of the holdings rests with Central government, while the State will be a minor partner.

(iv) **Public Corporation:**

A public Corporation is exactly like a public sector undertaking in its structure but is normally in the service sector instead of in the manufacturing sector.

eg: Life insurance corporation, Indian finance corporation, Indian Airlines.

Advantages of Public Sector Organizations:

(i) Profit go to the government and the society at large is benefited.

(ii) Government can afford to wait for a long time before profit is realized unlike private sectors.

(iii) Consumer interests are better safeguarded.

(iv) Service to society is the motto, not a profit.

(v) Capital, fuel, raw material, power and transport all easily made available to them.

Disadvantages:

Public Sector can never reach the efficiency of the private sector.

Government officers and politicians interfere too much in the internal affairs of the company.

Promotion in government organisation is normally on Seniority, not on merit. Therefore government servant do not workhard.

Wastage of material and labour is very high.

In complete or corrupt officials may occupy top positions.

The members of the Society Supply the capital, manage the business and share all profits and losses. Equality, mutual trust, mutual supervision, self reliance and laid works are the five pillars of a stable and successful co-operative organisation. If continues the features of large partnership as well as some features of joint stock company. This form of ownership was first developed in Germany due to two important reasons.

(i) The poor were exploited through long working hours poor wages, bad working condition etc; by the capitalists who owned large scale industries.
(ii) Too many middlemen between the producers and end users, increased the prices of the products and reduced the profit of the produces.

Types of Co-operative Societies:

(1) Producers Co-operative Society:- They manage their own business right from production upto retail sales their eliminating the middle area. They are their own bosses and they are theirown employees. They put in hand works and learn how to work in team spirit.
eg: Milk and dairy products Co-operative Society in villages.

(2) Consumers Co-operative Society:- In this form of co-operative consumers living in a particular area come together, open a stock, buy goods directly from the manufactures and sell it at wholesale late to its members.
eg: Malleswaram Co-operative Society, Bangalore

(3) Housing Co-operative Society:- In this form of Co-operative, employees of an organisation come together, buys large plots of land at a cheap rate, convert theme into sites, and help its members to build their own houses.
eg: B.E.L. Employees Housing Co-operative Society.

(4) Co-operative Banks:- In this form of co-operative members of the general public come together, contribute capital and start a bank. The bank accepts fixed deposits, extends loan facilities and encourages entrepreneurship among its members.eg: Sir. M. Visvesvaraya Co-operative bank.

Advantages of Co-operative Societies

Daily needs of life are available at low rates.
It is a democratic form of ownership.
Middlemen are avoided and so both produces and consumers are benefited.
Holding of stocks and blade marketing are eliminated
Once head costs are reduced because of honorary services by the members.

Joint sector

Joint sector refers to the enterprise owned and managed by the private sector and government / public sector undertakings. According to Duff Committee, joint sector is defined in the following way ‘Joint Sector would in one view, include units in which both public and private sector, investments have taken place and where the slates takes an active part in direction and control.

The main objectives and advantages of joint sector are.

(i) To stop the concentration of economic power.

(ii) Social control of industry

(iii) Acceleration of economic development.

(iv) Promotion of mixed economy

(v) Widening the base of entrepreneurship.

WAGES AND INCENTIVES

Characteristics of good wage payment or incentive system:-

(i) This should guarantee an adequate minimum day wage.

(ii) It must have fee consent of the workers.

(iii) It must reward the worker according to his capacity and merit.

(iv) It must be simple in its working so that may be readily understood by workers.

(v) It must not involve heavy clerical work and thereby increase the ultimate cost.

(vi) It should aim at increasing production without affecting quality.

(vii) The system should be fair both to employers and employers.

(viii) Incentive, bonus etc should be payable along with the wages and not pit off for future.

(ix) It should reduce wastage of material and careless use of plants, tools and equipment.

Methods of wage payment:

(a) Time or Day rate system.

(b) Straight piece work rate system.

(c) Combination of time rate and piece rate system.

(d) Incentives.

(e) Profit sharing system.

Time or Day rate system:-

This is the most common system found in practice. Under this system worker is paid an hourly, daily, weekly or monthly rate of wages. Thus his remuneration depends upon the number of hours for which he is employed and not upon the amount of his production.

Advantages:-

(i) The wages are fixed from the very beginning, so there is no confusion about the amount of payment.

(ii) The quality of the work can be achieved very easily.

(iii) No rough handling of machinery.

(iv) There are no difficult calculations to made

(v) The interruptions to works due to breakdown of machinery or some other part of the plant will not wake workers to suffer from the loss of wages.

Disadvantages:-

(i) The employee bears the loss resulting from slow and sluggish workers as they are paid the same wages irrespective of their output.

(ii) Strict supervision is required.

(iii) The system tends to give higher production cost.

(iv) This is not suitable in case of lazy workers.

(v) In this system, efficient workers may also become inefficient by working with inefficient workers.

Suitability:

It is suitable for factory workers such as foreman, time keepers, cleaners, engineers, store keepers, watchmen etc.

Straight piece work rate System:

Under this, a fixed rate of wage is paid for each piece or unit produced. Hence this system is suitable only for the worker repeats a definite operation or produces the same type of products continuously.

Advantages:

(i) This system gives every worker an opportunity to earn more by putting more efforts and at the same time output also increases.

(ii) Simple in its working and they can easily calculate their wages.

(iii) Workers are paid on their merits.

(iv) As supervision will be less, workers for more independent.

(v) Output increases and higher profit can be earned.

Disadvantages:

(i) As workers put maximum effects, their health may reduce

(ii) It will cause an increase the waste of material, because the worker will always try to obtain the maximum output.

(iii) The quality of work may be reduced.

(iv) It may cause over production and may result in losses, if there is limited demand for the product in the market.

(v) Accident due to hasty work will be more.

(vi) Mis utilisation of machinery.

Combination of day rate and piece rate system:

Under this system minimum weekly wages are fixed for all workers, and the minimum weekly wages are paid to him irrespective of his output during the week, provided he has worked for the fell working hours required in a week. If a worker in absent for some length or time during a week, his wages will be deducted proportionately.

The piece works system is combined with the day rate system. A job card of each worker is maintained to show the number of pieces of job completed by the worker during a weeks. Piece work rate of each job is fixed in advance. If the piece work wages earned by a worker are in excess than the time wages, the balance is paid to the worker. If the worker is short of time rate, the worker shall have to make more number of products and cover the last weeks short fall.

Advantages:

It provides incentive to workers.

Overhead costs of production are lowered.

Disadvantages:

If needs check on quality.

The entire benefit of extra payment goes to the worker.

Profit Sharing System:

This system has been introduced by the employees in order to encourage their employees and by means of which the workers receive a share of the profit over and above their normal wages.

Advantages:

(i) Better cooperation may be easily expected.

(ii) Reduction of supervision, results in reduction of supervision cost.

(iii) Non productive labour cost will be reduced.

Disadvantages:

(i) Efficiency of individual is not taken into account, worker, for greater and better output, non financial incentives must also be enforced and worker will also enjoy richer and filler life.

Some of the nonfinancial incentives:

(i) Personal interest and pride in work to be created in workmen.

(ii) Opportunity for quick promotions.

(iii) Opportunity for technical training in other technical organisations as well as abroad.

(iv) Perfect confidence in the management.

(v) Provisions of children welfare, medical aid etc.

(vi) Provisions of canteens.

Methods of financial incentive payment:

(i) Piece rate system:

Under this system piece rate for completion of the job is fixed. If a worker, completes the job earlier, he can save his time, he can make more jobs and whatever the extra money he gets for the extra work, wholly goes to him. The employee will also be benefited by the savings in overheads for the extra output.

(ii) Cent per cent premium:

In this the standard time for completion of the job is fixed and its rate of completion during this period is also fixed. Now the worker completes the job in time is not given any incentive, but those who completes the job earlier, get full payment for the time saved.

(iii) Halsey Premium Plan:

In this system, an hourly rate or daily rate is guaranteed to the workers. A standard time is also fixed for the performance of each job. If a worker saved the standard time, then he will be paid hourly rate or daily rate plus 33.33% of time saved as incentive.
In this plan, incentive goes on increasing as the output increases. Here a part of the saving goes to the worker and remaining part of the saving to the employee.

(iv) Will premium Plan:
This is similar to Halsey premium plan, but in this worker gets upto 50% of his extra output along with standard day rate.

(v) Bedaux Premium Plan:
This is also like Halsey and Will premium plans. But in this workers are given at the rate of 75% of their extra output along with standard day rate.

(vi) Rowan Premium Plan:
In this, worker is again guaranteed his daily or hourly rate, A standard time is also fixed for job. /a premium is given to workers those who saved the standard time.

In this system, the increases upto certain output but decreases in the same ratio afterwards. The worker gets maximum incentive, when he completes the tasks in half the standard time.

(vii) Emerson efficiency plan:
In this systems, premium is given to those workers who attain more than of the standard output. The standard output for the day is so decided that the average worker an complete at least of the standard output. A basic day rate is fixed irrespective of their capabilities and every worker gets atleast his standard output.
If a worker performs upto 60% of the standard output, he gets no incentive.
If a worker performs upto 80% of the standard output, he gets 10% of the day wages as incentive.
Upto 100% – 20% of the day wages as incentive.
Upto 120% – 40% of the day wages as incentive

(viii) Gantt's task and bonus system:

In this system, a careful study of the job is made and from that study best conditions for the performance of the job are determined. On the basis of these performances standard output to a given time is set. Now if a worker completes the job in a given standard time, he receives bonus equals to 25% of the time taken. When a worker fails to produce the required output he only gets his time rate without any bonus.

(ix) Merric's multiple piece rate system:

Merric divided the workers into three categories, namely, beginners, averages and first class workers. The higher rates are paid to those who reach the standard, second rates for those who reach 80% of the standard, and a third rate is below the 80% output.

<u>Advantages of Incentive System</u>:

(i) Workers are encouraged to increase production to earn more.

(ii) Workers day wages are guaranteed to all workers.

(iii) Promotes good relations between employers and employers.

(iv) Cost of supervision are reduced, as workers themselves are motivated to work hard and improve performance.

(v) A spirit of mutual co-operation and team work is created among the workers.

(vi) Help to improve discipline and good relations.

(vii) Employers are encouraged to become innovative.

Fringe benefits:

In addition to pay, certain benefits are also provided to all the employers of organisation. Fringe benefits do not motivate the workers, as these are offered to all the employees. These help in maintaining cordial atmosphere in the organisation.

They are classified into two categories.

(i) Legally required benefits:

a) Social security: Insurance, PF, gratuity

b) Workers compensation on accident, retrenchment etc.

c) Holidays and rest periods as per factory act.

(ii) Voluntary benefits provided by the employee

a) Additional rest periods and holidays with pay.

b) Leave including sick leaves

c) Pension plans.

d) Health insurance, medical benefits

e) Housing

f) Cultural activities. (g) Educational facilities

h) Recreational activities

(iii) The distribution will normally take place only once a year, the worker may lose interest in it.

(iv) If the efficient workers are not selected as group leaders, the efficiency of the whole group suffers.

Incentives:

Incentives are referred to as performance linked compensation paid to improve motivation and productivity of the employer.

Incentive is a kind of monetary reward which is closely related to the performance of a worker, resetting increasing in wages corresponding to an increase in output.

Types of incentives:

Incentives are of two types.

(i) Financial incentives.

(ii) Nonfinancial incentives.

Financial Incentives:

These are extra payment given to workers in addition to their normal wages. For examples, it an employer friends that he will be earning an extra profit of Rs. 25, if a particular work is finished in 5 hours less than the prescribed time. Now if the workman is promised an extra payment of Rs. 10. This extra payment is called incentive.

Non-Financial Incentives:

The financial incentives must be supported by the nonfinancial incentives, since only cash wages cannot help in solving the problems of industrial productivity. Inorder to create interest in a

Bonus system:

Bonus system is used in continuous process and assembly lines, a number of workers are required to complete the job and is not practicable to assess the effort of individual worker. So the bones system is necessary to retain the incentive payment idea.

This bonus is given to workers on the basis of profits, production or productivity.

The method of payments are of two types.

(1) Collective bonus system:

In some big industries, a collective bonus of two of more months extra salary is given to all workers, if the profits of that business year is good.

If there are good profits, the bonus will be declared after six months or at the end of the year. That amount will be payable to workers at the time of declaration.

(2) Group bonus system:

Here, each department or section is offered a separate fixed bonus. The bonus is divided between the foremen and workers. The bonus is given to foremen also, because he is responsible for increasing the output and reducing the wastage.

Bonus act, September, 1965.

It states that, every factory employing 20 or more workers must give a minimum bonus of 8.33% of the annual wages in inclusive of dearness allowance or Rs. 80 to all workers, irrespective of if has made some profit or not.

It is applicable to all factories.

Once a factory is covered by this act, it will continue do so, even if there is reduction in the workers below 20.

Workers in newly established organisations will not be eligible for for bonus for the first five years.

Minimum bonus is 8.33% of wages inclusive of dearness allowance or Rs. 80 and a maximum is 20%.

After deducting all charges, 60% of the net profit is credited to bonus fund.

If any year net profit exceeds the maximum bonus excess amount will be carried forward to the next years bonus fund. Similarly when in any year, there are no profit, the defect will be set off in the following year.

Advantages :

It ensures stability of workman. At any time the an year, worker learning the job, shall have to mass some of the bonus.

Disadvantages:

No distinction between efficient and ordinary worker because same amount is given to all workers.

No immediate incentive to workers.

Sometimes a good worker may receive only a small amount of bonus in comparison to his efforts.

*TOPIC - 5*MANAGEMENT BY OBJECTIVES:

This concept was first proposed by Peter Drucker in 1954 and was improved by several others. They all felt that include to obtain the best results, the management must provide objectives from the top level management to bottom level management. The performance of all the employees are measured against their achievement off these goals, so it as who called management by results or it is a result oriented approach.

Definition:

Management by Objectives (MBO) is a strategic approach to enhance the performance of an organization. It is a process where the goals of the organization are defined and conveyed by the management to the members of the organization with the intention to achieve each objective.

An important step in the MBO approach is the monitoring and evaluation of the performance and progress of each employee against the established objectives. Ideally, if the employees themselves are involved in setting goals and deciding their course of action, they are more likely to fulfill their obligations.

Steps in Management by Objectives Process

1. Define organization goals

Setting objectives is not only critical to the success of any company, but it also serves a variety of purposes. It needs to include several different types of managers in setting goals. The objectives set by the supervisors are provisional, based on an interpretation and evaluation of what the company can and should achieve within a specified time.

2. Define employee objectives

Once the employees are briefed about the general objectives, plan, and the strategies to follow, the managers can start working with their subordinates on establishing their personal objectives. This will be a one-on-one discussion where the subordinates will let the managers know about their targets and which goals they can accomplish within a specific time and with what resources. They can then share some tentative thoughts about which goals the organization or department can find feasible.

3. Continuous monitoring performance and progress

Though the management by objectives approach is necessary for increasing the effectiveness of managers, it is equally essential for monitoring the performance and progress of each employee in the organization.

4. Performance evaluation

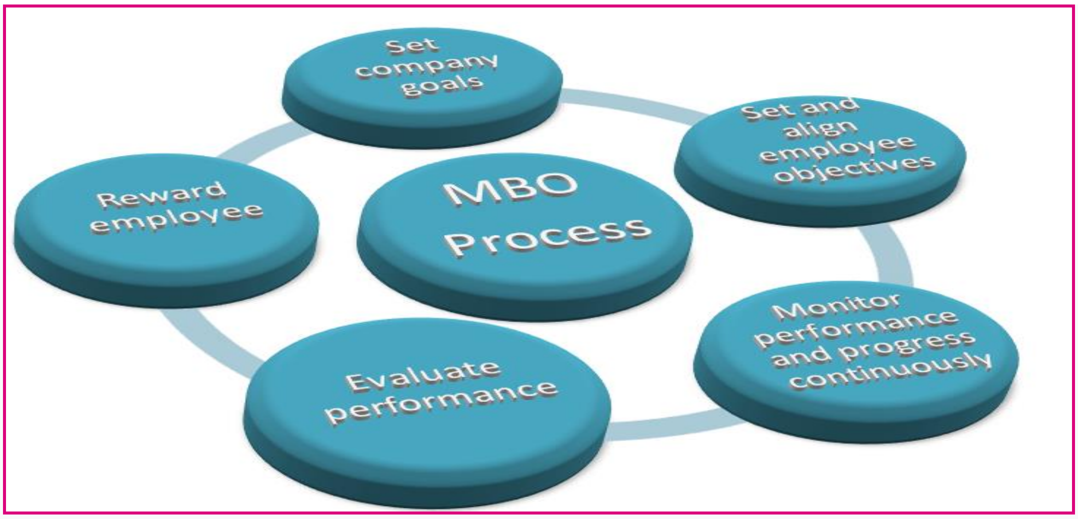
Within the MBO framework, the performance review is achieved by the participation of the managers concerned.

5. Providing feedback

In the management by objectives approach, the most essential step is the continuous feedback on the results and objectives, as it enables the employees to track and make corrections to their actions. The ongoing feedback is complemented by frequent formal evaluation meetings in which superiors and subordinates may discuss progress towards objectives, leading to more feedback.

6. Performance appraisal

Performance reviews are a routine review of the success of employees within MBO organizations.



Benefits of Management by Objectives

- Management by objectives helps employees appreciate their on-the-job roles and responsibilities.
- The Key Result Areas (KRAs) planned are specific to each employee, depending on their interest, educational qualification, and specialization.
- The MBO approach usually results in better teamwork and communication.
- It provides the employees with a clear understanding of what is expected of them. The supervisors set goals for every member of the team, and every employee is provided with a list of unique tasks.
- Every employee is assigned unique goals. Hence, each employee feels indispensable to the organization and eventually develops a sense of loyalty to the organization.
- Managers help ensure that subordinates' goals are related to the objectives of the organization.

Limitations of Management by Objectives

- Management by objectives often ignores the organization's existing ethos and working conditions.
- More emphasis is given on goals and targets. The managers put constant pressure on the employees to accomplish their goals and forget about the use of MBO for involvement, willingness to contribute, and growth of management.

- The managers sometimes over-emphasize the target setting, as compared to operational issues, as a generator of success.
- The MBO approach does not emphasize the significance of the context wherein the goals are set. The context encompasses everything from resource availability and efficiency to relative buy-in from the leadership and stakeholders.
- Finally, there is a tendency for many managers to see management by objectives as a total system that can handle all management issues once installed. The overdependence may impose problems on the MBO system that it is not prepared to tackle, and that frustrates any potentially positive effects on the issues it is supposed to deal with.

TOPIC - 6 MANAGEMENT BY EXCEPTION

Definition: Management by Exception, shortly called as MBE is a management style or philosophy that empowers the manager to concentrate on the exceptionally important or critical matters and taking important decisions while facilitating the front line workers to complete the day to day activities.

It aims at keeping the focus of the management on extremely important tasks and problems or areas in need of action

.

Components of Management By Exception

The six fundamental components of Management By Exception are:

1. **Measurement**: Assignment of values to the past and present performances, so as to easily recognize an exception.
2. **Projection**: Forecasts that measurement which is relevant to the organizational objectives and extends the same, to future expectations.
3. **Selection**: Determines the parameters used by the management to pursue organizational objectives.
4. **Observation**: Measurement of existing performance so that the managers are having the knowledge of the existing state of affairs of the organization.
5. **Comparison**: Compare the actual and planned performance and indicating the exception which needs managerial action and reports the variances.
6. **Decision Making**: Prescription of the course of action which needs to be taken so as to ensure that the performance is back in control or to adjust expectations, which represents the changing conditions.

This principle requires the compliance of the principle of delegation of authority, i.e. a substantial degree of delegation must be present in the organization. According to this principle, any issue of unusual or non-recurring nature needs to be referred upwards, so as to be decided by the top tier executives and managers.

Process of Management By Exception

The steps involved in the process of Management by Exception (MBE), are listed as under:

- Identifying and describing Key Result Areas (KRA).
- Establishing standards and determining an acceptable level of deviations.
- Making Comparison of actual result with that of the expected or the standard result.
- Ascertaining variance.
- Analysing the causes of such variance (deviation).
- Strategizing and taking necessary actions wherever required and possible.

It is a well-known fact that if an organization seeks to control everything, resultantly it controls nothing. Hence, only material deviations, that exceed the specific limit, are referred to the management. Meaning that any information reflecting a considerable variance from the budgeted or planned results are taken to the notice of the top-level management.

Therefore, if the company's policies lay down 3% increase in the overheads as an acceptable range, then anything over and above will be informed to the top executives.

Once the management is made aware of such deviation, it should be analysed to know the causes for such deviation, be it defective process, the inadequacy of resources, unrealistic standards, etc. Thereafter the actual cause is identified, corrective action is taken to overcome, at the appropriate level.

Importance of Management By Exception

The points given below will discuss the importance of management by exception:

- Effective utilization of manager's time, by driving their attention to those areas that need managerial experience and action.
- Timely identification of discrepancies and its causes
- Prompt decision making and a suitable flow of action.
- Assists the firm in growing and improving its output.
- Optimum utilization of the organization's resources.
- Better delegation of authority
- Identification of crises
- Enhances degree of communication

In a nutshell, in management by exception, the manager steps in, only when the employees fail to meet out their performance standards.

What is the difference between Management by Objectives (MBO) and Management by Exception (MBE)?

Definition of Management by Objectives (MBO) and Management by Exception (MBE)

Management by objectives: Management by objectives can be defined as a management model that attempts to devise a common objective that is acceptable for both the management and employees, which will improve the overall performance of the organization.

Management by exception: Management by exception can be defined as a management mode that provides the objectives for employees and only concentrate on significant deviations from the set objectives or task which will reduce the energy and time lost on unnecessary monitoring and evaluation procedures.

Characteristics of Management by Objectives (MBO) and Management by Exception (MBE)

Employee Participation

Management by objectives: Employee participation is essential for an MBO model as it needs a common objective acceptable for management and employees.

Management by exception: Employee participation in objective setting and decision making is minimal in an MBE model as that responsibility is rested with senior management.

Role Ambiguity

Management by objectives: In MBO, the clarity of personal responsibility towards organizational goals is better communicated and understood by the employee.

Management by exception: In MBE, the clarity will be lacking, and employees will perform a generic responsibility without understanding his role in the overall objective achievement.

Dependency

Management by objectives: In MBO, the dependency on one department or group is less as operations are handled with organizational wide participations.

Management by exception: In MBE, the dependency on one department especially of financial analysis / account is high as they are responsible for forecasting, budgeting and monitoring. Further, they are responsible for communicating significant deviations.

Efficiency

Management by objectives: In MBO, the active involvement of whole organization in decision making can lead to delays and complex procedures which can reduce efficiency.

Management by exception: In MBE, as only a certain group makes important decisions and investigations are performed only in instances of significant deviation the time devoted to daily work is more which can result in better efficiency.

EXAMPLES AND APPLICATIONS:

Example for Decision making process:

The elements of decision analysis problems are as follow:

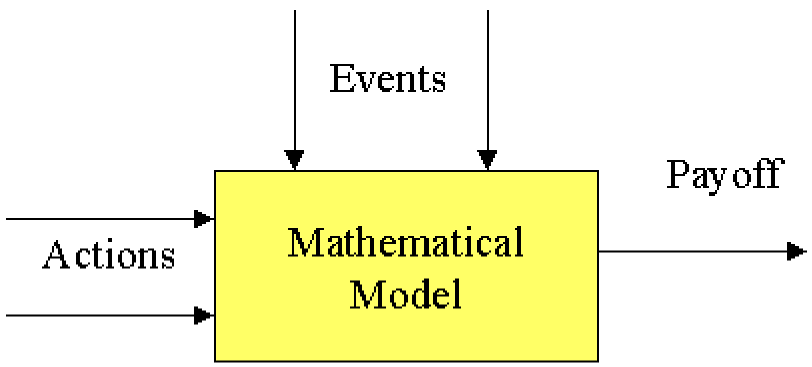
1. A sole individual is designated as the decision-maker. For example, the CEO of a company, who is accountable to the shareholders.
2. A finite number of possible (future) events called the 'States of Nature' (a set of possible scenarios). They are the circumstances under which a decision is made. The states of nature are identified and grouped in set "S"; its members are denoted by "s(j)". Set S is a collection of mutually exclusive events meaning that only one state of nature will occur.
3. A finite number of possible decision alternatives (i.e., actions) is available to the decision-maker. Only one action may be taken. What can I do? A good decision requires seeking a better set of alternatives than those that are initially

presented or traditionally accepted. Be brief on the logic and reason portion of your decision. While there are probably a thousand facts about an automobile, you do not need them all to make a decision. About a half dozen will do.

4. Payoff is the return of a decision. Different combinations of decisions and states of nature (uncertainty) generate different payoffs. Payoffs are usually shown in tables. In decision analysis payoff is represented by positive (+) value for net revenue, income, or profit and negative (-) value for expense, cost or net loss. Payoff table analysis determines the decision alternatives using different criteria. Rows and columns are assigned possible decision alternatives and possible states of nature, respectively.

   Constructing such a matrix is usually not an easy task; therefore, it may take some practice.

Source of Errors in Decision Making: The main sources of errors in risky decision-making problems are: false assumptions, not having an accurate estimation of the probabilities, relying on expectations, difficulties in measuring the utility function, and forecast errors.



Components of a Probabilistic Model

Consider the following Investment Decision-Making Example:

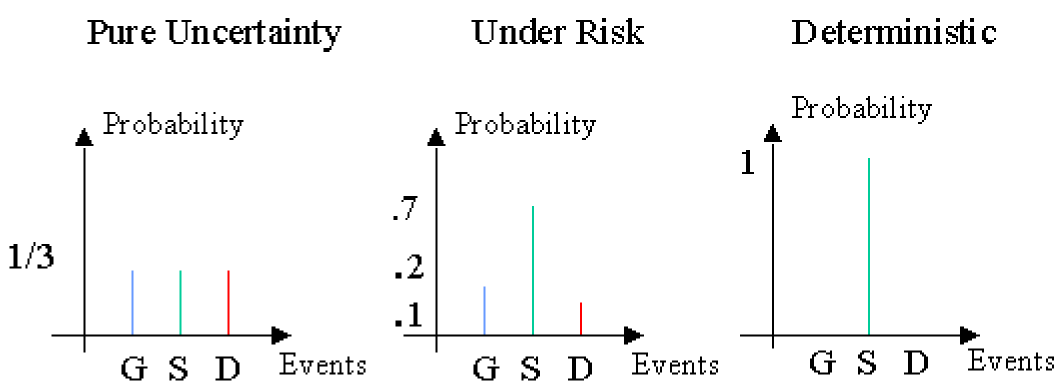
The Investment Decision-Making Example:

States of Nature

		Growth	Medium G	No Change	Low
		G	MG	NC	L
	Bonds	12%	8	7	3
Actions	Stocks	15	9	5	-2
	Deposit	7	7	7	7

The States of Nature are the states of economy during one year. The problem is to decide what action to take among three possible courses of action with the given rates of return as shown in the body of the table.

For example, in an investment decision-making situation, one is faced with the following question: What will the state of the economy be next year? Suppose we limit the possibilities to Growth (G), Same (S), or Decline (D). Then, a typical representation of our uncertainty could be depicted as follows:



Relevant Information Sharpen Our Uncertainty

Making a Better Decision by Buying Reliable Information (Bayesian Approach)

In many cases, the decision-maker may need an expert's judgment to sharpen his/her uncertainties with respect to the probable likelihood of each state of nature. For example, consider the following decision problem a company is facing concerning the development of a new product:

States of Nature

	High Sales	Med. Sales	Low Sales
	A(0.2)	B(0.5)	C(0.3)
A1 (develop)	3000	2000	-6000
A2 (don't develop)	0	0	0

The probabilities of the states of nature represent the decision-maker's (e.g. manager) degree of uncertainties and personal judgment on the occurrence of each state. We will refer to these subjective probability assessments as 'prior' probabilities.

The expected payoff for each action is:

A1= 0.2(3000) + 0.5(2000) + 0.3(-6000)= $ -200 and A2= 0;

so the company chooses A2 because of the expected loss associated with A1, and decides not to develop.

However, the manager is hesitant about this decision. Based on "nothing ventured, nothing gained" the company is thinking about seeking help from a marketing research firm. The marketing research firm will assess the size of the product's market by means of a survey.

Now the manager is faced with a new decision to make; which marketing research company should he/she consult? The manager has to make a decision as to how 'reliable' the consulting firm is. By sampling and then reviewing the past performance of the consultant, we can develop the following **reliability matrix**:

		1. Given What Actually Happened in the Past		
		A	B	C
2. What the	Ap	0.8	0.1	0.1
Consultant	Bp	0.1	0.9	0.2
Predicted	Cp	0.1	0.0	0.7

All marketing research firms keep records (i.e., historical data) of the performance of their past predictions. These records are available to their clients free of charge. To construct a reliability matrix, you must consider the marketing research firm's performance records for similar products with high sales. Then, find the percentage of which products the marketing research firm correctly predicted would have high sales (A), medium sales (B), and little (C) or almost no sales. Their percentages are presented by

$P(A_p|A) = 0.8$, $P(B_p|A) = 0.1$, $P(C_p|A) = 0.1$,

in the first column of the above table, respectively. Similar analysis should be conducted to construct the remaining columns of the reliability matrix.

Note that for consistency, the entries in each column of the above reliability matrix should add up to one. While this matrix provides the conditional probabilities such as $P(A_p|A) = 0.8$, the important information the company needs is the reverse form of these conditional probabilities. In this example, what is the numerical value of $P(A|A_p)$? That is, what is the chance that the marketing firm predicts A is going to happen, and A actually will happen? This important information can be obtained by applying the **Bayes Law** (from your probability and statistics course) as follows:

a) Take probabilities and multiply them "down" in the above matrix,

b) Add the rows across to get the sum,

c) Normalize the values (i.e. making probabilities adding up to 1) by dividing each column number by the sum of the row found in Step b,

0.2	0.5	0.3	
A	B	C	SUM
02(0.8) = 0.16	0.5(0.1) = 0.05	0.3(0.1) = 0.03	0.24
0.2(0.1) = 0.02	0.5(0.9) = 0.45	0.3(0.2) = 0.06	0.53
0.2(0.1) = 0.02	0.5(0) = 0	0.3(0.7) = 0.21	0.23

A	B	C
(.16/.24)=.667	(.05/.24)=.208	(.03/.24)=.125
(.02/.53)=.038	(0.45/.53)=.849	(.06/.53)=.113
(.02/.23)=.087	(0/.23)=0	(0.21/.23)=.913

The Discovery and Management of Losses

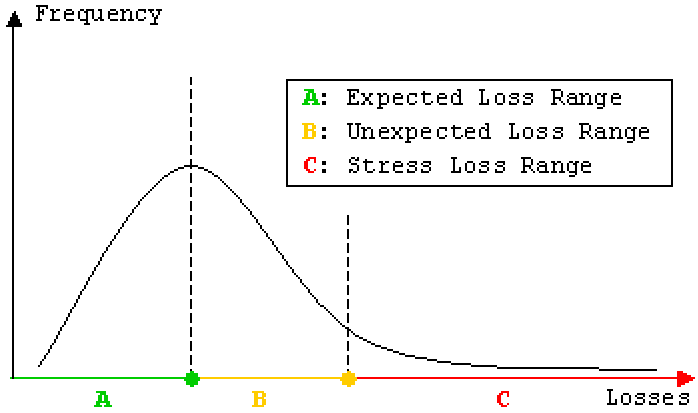
In discovery and management of losses (expressed in the monetary terms) perception and measuring the chance of events is crucial. Losses might have various sources. These sources include Employees, Procedures, and External factors.

- Employees: Some employees may have concentration problem, insufficient knowledge, and engage in fraud.
- Procedures: Some procedures are wrongly designed, or they are wrongly implemented.
- External factors: These include dependency on external unreliable services and suppliers, lack of security form external criminal activities, and finally disasters, such as strong earthquakes.

A rare or unexpected event with potentially significant consequences for decision-making could be conceived as a risk or an opportunity. The main concerns are: How to predict, identify or explain chance events and their consequences? How to assess, prepare for or manage them?

A decision-maker who is engaged in planning, needs to adopt a view for the future, in order to decide goals, and to decide the best sequence of actions to achieve these goals by forecasting their consequences. Unfortunately, the unlikeness of such events makes them difficult to predict or explain by methods that use historical data. However, focusing on the decision-maker's psychological-attitude factors and its environment is mostly relevant.

The following figure provides a classification of the loss frequency function together with the ranges for the Expected, Unexpected, and the Stress, which must be determined by the decision-makers ability and resources.



A Classification of the Loss Frequency Function

The manager's ability to discover both unexpected and stress loss events and forecast their consequences is the major task. This is because, these event are very unlikely, therefore making them difficult to predict or explain. However, once a rare event has been identified, the main concern is its consequences for the organization. A good manager cannot ignore these events, as their consequences are significant. For example, although strong earthquakes occur in major urban centers only rarely such earthquakes tend to have human and economic consequences well beyond that of the typical tremor. A rational public safety body for a city in an earthquake-prone area would plan for such contingencies even though the chance of a strong quake is still very small.

Decision Making in Economics and Finance:

- ABC Inventory Classification -- an analysis of a range of items, such as finished products or customers into three "importance" categories: A, B, and C as a basis for a control scheme. This pageconstructs an empirical cumulative distribution function (ECDF) as a measuring tool and decision procedure for the ABC inventory classification.
- Inventory Control Models -- Given the costs of holding stock, placing an order, and running short of stock, this page optimizes decision parameters (order point, order quantity, etc.) using four models: Classical, Shortages Permitted , Production & Consumption, Production & Consumption with Shortages.

- Optimal Age for Replacement -- Given yearly figures for resale value and running costs, this page calculates the replacement optimal age and average cost.
- Single-period Inventory Analysis -- computes the optimal inventory level over a single cycle, from up-to-28 pairs of (number of possible item to sell, and their associated non-zero probabilities), together with the "not sold unit batch cost", and the "net profit of a batch sold".

Probabilistic Modeling:

- Bayes' Revised Probability -- computes the posterior probabilities to "sharpen" your uncertainties by incorporating an expert judgement's reliability matrix with your prior probability vector. Can accommodate up to nine states of nature.
- Decision Making Under Uncertainty -- Enter up-to-6x6 payoff matrix of decision alternatives (choices) by states of nature, along with a coefficient of optimism; the page will calculate Action & Payoff for Pessimism, Optimism, Middle-of-the-Road, Minimize Regret, and Insufficient Reason.
- Determination of Utility Function -- Takes two monetary values and their known utility, and calculates the utility of another amount, under two different strategies: certain & uncertain.
- Making Risky Decisions -- Enter up-to-6x6 payoff matrix of decision alternatives (choices) by states of nature, along with subjective estimates of occurrence probability for each states of nature; the page will calculate action & payoff (expected, and for most likely event), min expected regret , return of perfect information, value of perfect information, and efficiency.
- Multinomial Distributions -- for up to 36 probabilities and associated outcomes, calculates expected value, variance, SD, and CV.
- Revising the Mean and the Variance -- to combine subjectivity and evidence-based estimates. Takes up to 14 pairs of means and variances; calculates combined estimates of mean, variance, and CV.
- Subjective Assessment of Estimates -- (relative precision as a measuring tool for inaccuracy assessment among estimates), tests the claim that at least one estimate is away from the parameter by more than r times (i.e., a relative

precision), where r is a subjective positive number less than one. Takes up-to-10 sample estimates, and a subjective relative precision (r<1); the page indicates whether at least one measurement is unacceptable.

- Subjectivity in Hypothesis Testing -- Takes the profit/loss measure of various correct or incorrect conclusions regarding the hypothesis, along with probabilities of Type I and II errors (alpha & beta), total sampling cost, and subjective estimate of probability that null hypothesis is true; returns the expected net profit.

Time Series Analysis and Forecasting

- Autoregressive Time Series -- tools for the identification, estimation, and forecasting based on autoregressive order obtained from a time series.
- Detecting Trend & Autocrrelation in Time Series -- Given a set of numbers, this page tests for trend by Sign Test, and for autocorrelation by Durbin-Watson test.
- Plot of a Time Series -- generates a graph of a time series with up to 144 points.
- Seasonal Index -- Calculates a set of seasonal index values from a set of values forming a time series. A related page performs a Test for Seasonality on the index values.
- Forecasting by Smoothing -- Given a set of numbers forming a time series, this page estimates the next number, using Moving Avg & Exponential Smoothing, Weighted Moving Avg, and Double & Triple Exponential Smoothing, &and Holt's method
- Runs Test for Random Fluctuations -- in a time series.
- Test for Stationary Time Series -- Given a set of numbers forming a time series, this page calculates the mean & variance of the first & second half, and calculates one-lag-apart & two-lag-apart autocorrelations. A related page: Time Series' Statistics calculates these statistics, and also the overall mean & variance, and the first & second partial auto correlations

Conclusion

The above lecture covered the topics which includes,

Nature of management and its process

Functions and principles of management

Contribution of Taylor and Fayol to management

Industrial ownership- Types, formation, merits and demerits

Management by objective

Management by exception

Nature of management and its process, functions and principles of management, contribution of taylor and fayol to management, MBO and MBE. This module have the functional focus to implement engineering applications with the specific standards.

MCQ Questions

1. The best definition of economics is

A) How choices are made under conditions of scarcity.

B) How money is used

C) How goods and services are produced.

D) How businesses maximize profits.

(Ans: a)

2. Managerial economics generally refers to the integration of economic theory with business

A. Ethics

B. Management

C. Practice

D. All of the above

(Ans: c)

3. A Joint Stock Company is managed by the Board of Directors elected by _____ .

A. Top management

B. Shareholders

C. Employees of company

D. None of the above

(Ans: b)

4. Distinction between private sector and public sector is determined on the basis of

A. Economic system
B. Motive
C. Principle of pricing
D. All of the above

(Ans: d)

5. The management of the _________ form of business organization is totalitarian in nature.

A. Cooperative
B. Partnership
C. Individual proprietorship
D. All of the above

(Ans: a)

6. The fundamental concept of Economics about resources is that the resources are

A. equally distributed
B. unequally distributed
C. scarce
D.unlimited

(Ans: c)

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UNIT-II

Planning – Nature & purpose, Kinds of plans – Decision making process and kinds of decision – Organization process – organization structure, Staffing - Selection and Recruitment - Career Development - Career stages – Training - Performance Appraisal

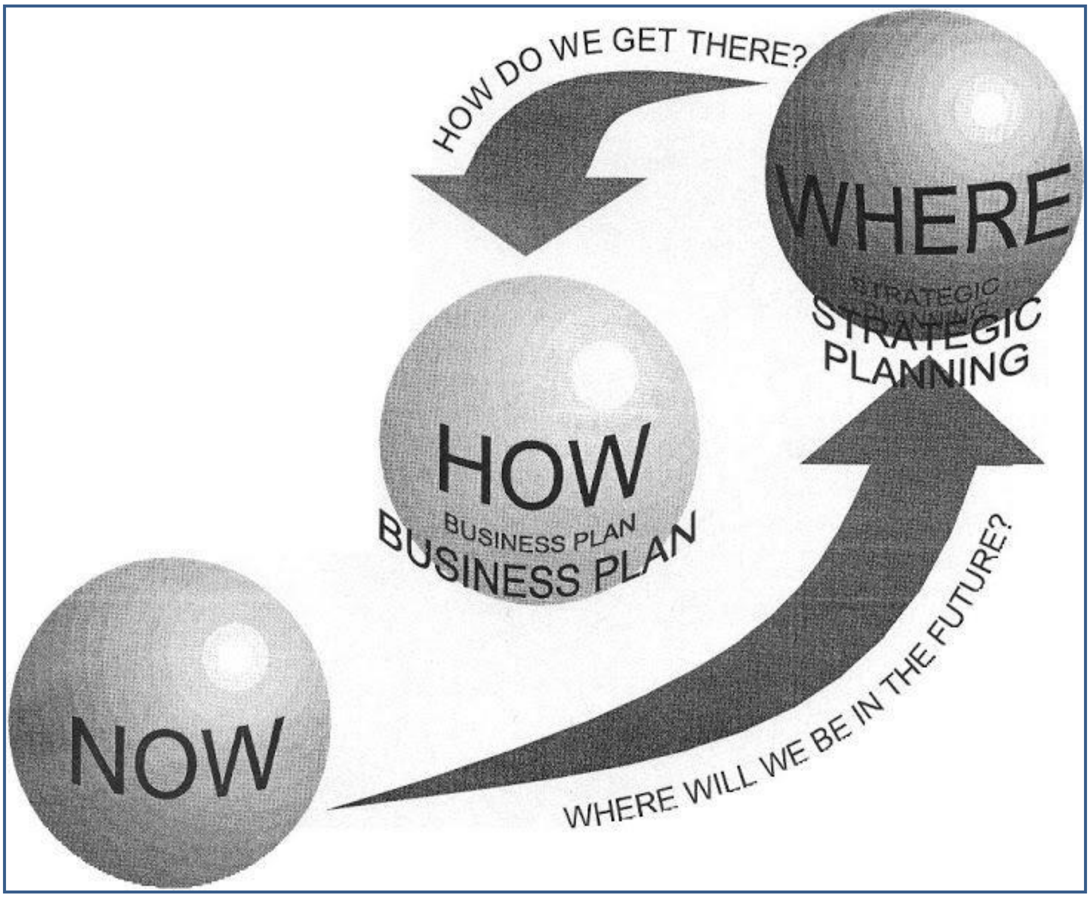
Topics

- **Planning – Nature & purpose, Kinds of plans**
- **Decision making process and kinds of decision**
- **Organization process – organization structure**
- **Staffing**
- **Selection and Recruitment**
- **Career Development**
- **Career stages**
- **Training**
- **Performance Appraisal**

PLANNING

Planning is the first of essential managerial functions. Planning is important as by nature it enquirers about organizational goals and involves decision making about desired ways and means to achieve goals.

Planning is the process by which managers establish goals and define the methods by which these goals are to be attained. Planning involves selecting missions and objectives and the actions to achieve them; it requires decision making, which is choosing from among alternative future courses of action.



Planning is thus taken as the foundation for future activities. Newman has thus defined it as, "Planning is deciding in advance what is to be done; that is a plan is a projected course of action."

So, planning can be thought of as deciding on a future course of action. It may also be treated as a process of thinking before doing it.

Management has to plan for long-range and short-range future direction by looking ahead into the future, by estimating and evaluating the future behavior of the relevant environment and by determining the enterprise's own desired role.

Planning involves determining various types and volumes of physical and other resources to be acquired from outside, to allocate these resources in an efficient manner among competing claims and to make arrangements for the systematic conversion of these resources into useful outputs.

As it is clear from the above discussion, plans have two basic components: goals and action statements.

Goals represent an end state — the targets and results that managers hope to achieve.

Action statements represent the means by which an organization goes ahead to attain its goals. Planning is a deliberate and conscious act by means of which managers determine a course of action for pursuing a specific goal.

Planning to a manager means thinking about what is to be done, who is going to do it, and how and when he will do it. It also involves thinking about past events (retrospectively) and about future opportunities and impending threats (prospectively).

Planning enquirers about organizational strengths and weaknesses and involves decision making about desired ways and means to achieve them.

There are, however, differences between decision making and planning. Decisions can be made without planning but planning cannot be done without making decisions.

Nature of Planning

The nature of planning can be understood by examining its four major aspects. They are;

1. It is a contribution to objectives,
2. It is primacy among the manager's tasks.
3. It is pervasiveness, and
4. The efficiency of resulting plans.

The contribution of Planning to the Attainment of Objectives

Since plans are made to attain goals or objectives, every plan and all its support should contribute to the achievement of the organization's purpose and objectives.

An organized enterprise exists to accomplish group objectives through willing and purposeful co-operation.

Primacy of Planning

That planning is the prime managerial function is proved by the fact that all other functions such as organizing, staffing, **leading** and **controlling** are designed to support the accomplishment of the enterprise's objectives.

Planning quite logically, therefore, comes first **before executing all other managerial functions** as it involves establishing the objectives necessary for all group efforts. Also, all the other managerial functions must be planned if they are to be effective.

Likewise, planning and controlling are inextricably bound up. Control without a plan is meaningless because the plan provides the basis or standard of control.

Pervasiveness of Planning

Planning is a unique and universal function of all managers.

The character and scope of planning may vary with each manager's authority and with the nature of the policies and plans outlined by superiors, but all managers must have some function of planning.

Because of one's authority or position in the managerial hierarchy, one may do more or less planning, but some kind or amount of planning a manager must do.

According to Weihrich and Koontz; "All managers, from presidents to first-level supervisors – plan."

The Efficiency of Plans

Plans should not only be effective, but also efficient. The effectiveness of a plan relates to the extent to which it accomplishes the objectives.

The efficiency of the plan, however, means its contribution to the purpose and objectives, offset by the costs and other factors required to formulate and operate it.

Plans are efficient if they achieve their objective at a reasonable cost when such a cost is the measure not only in terms of time, money or production but also in terms of satisfaction of the individual or group.

Both conceptual and practical reasons are put forward in support of planning. Two conceptual reasons supporting systematic planning by managers are limited resources and an uncertain environment.

Meeting the Challenge of Resource Scarcity

Resource scarcity is a very important consideration for any organization today. There would be no need for planning if material, financial and human resources were unlimited and cheap.

Planners in both private business and public agencies are challenged to stretch their limited resources through intelligent planning.

Otherwise, wasteful inefficiencies would give rise to higher prices, severe shortages, and great public dissatisfaction.

Facing Environmental Uncertainty

The second most important conceptual reason is that organizations continually face environmental uncertainty in the course of accomplishing the tasks.

Organizations meet this challenge largely through planning safeguards.

Some organizations do this job better than others partly because of their different patterns of response to environmental factors beyond the organization's immediate control.

Besides, managers have several practical reasons for formulating plans for themselves, their employees, and various organizational units, viz.,

1. to offset uncertainty and change;
2. to focus organizational activity on a set of consciously created objectives;
3. to provide a coordinated, systematic roadmap for future activities;
4. to increase, economic efficiency via efficient operation; and
5. to facilitate control by establishing a standard for subsequent activities.

Planning and Performance

Although organizations that use formal planning do not always outperform those that do not plan, most studies show positive relationships between planning and performance.

Effective planning and implementation play a greater part in high performance than does the amount of planning done.

Studies have shown that when formal planning has not led to higher performance, the external environment is often the reason.

The Role of Goals and Plans in Planning

Planning is often called the primary management function because it establishes the basis for all other functions.

Planning involves two important elements: goals and plans. Goals (often called objectives) are desired outcomes for individuals, groups, or entire organizations.

4 Types of Plan

There are **main 4 types of plan**;

1. **Hierarchical Plans:**

These plans are drawn at three major hierarchical levels, namely, the institutional, the managerial and the technical core. The plans for these three levels are;

Strategic plan.

Administrative or Intermediate plan.

1. Operational plans can also be categorized according to frequency or repetitiveness of use. They are broadly classified as;

2. **Standing Plans:**

Standing plans are drawn to cover issues that managers face repeatedly. Such a standing plan may be called a standard operating procedure (SOP). Generally, five types of standing plans are used;

Mission or purpose

Strategy

Policies

Rules

Procedures

3. **Single-use Plans:**

Single-use plans are prepared for single or unique situations or problems and are normally discarded or replaced after one use. Generally, four types of single-use plans are used. These are;

1. Objectives or Goals
2. Programs
3. Projects
4. Budgets

4. **Contingency Plans:**

Contingency plans are made to deal with situations that might crop up if these assumptions turn out to be wrong. Thus contingency planning is the development of alternative courses of action to be taken if events disrupt a planned course of action.

DECISION MAKING PROCESS AND KINDS OF DECISION

Decision making is a daily activity for any human being. There is no exception about that. When it comes to business organizations, decision making is a habit and a process as well.

Effective and successful decisions make profit to the company and unsuccessful ones make losses. Therefore, corporate decision making process is the most critical process in any organization.

In the decision making process, we choose one course of action from a few possible alternatives. In the process of decision making, we may use many tools, techniques and perceptions.

In addition, we may make our own private decisions or may prefer a collective decision.

Usually, decision making is hard. Majority of corporate decisions involve some level of dissatisfaction or conflict with another party.

Let's have a look at the decision making process in detail.

Steps of Decision Making Process

Following are the important steps of the decision making process. Each step may be supported by different tools and techniques.

Step 1: Identification of the purpose of the decision

In this step, the problem is thoroughly analysed. There are a couple of questions one should ask when it comes to identifying the purpose of the decision.

What exactly is the problem?

Why the problem should be solved?

Who are the affected parties of the problem?

Does the problem have a deadline or a specific time-line?

Step 2: Information gathering

A problem of an organization will have many stakeholders. In addition, there can be dozens of factors involved and affected by the problem.

In the process of solving the problem, you will have to gather as much as information related to the factors and stakeholders involved in the problem. For the process of information gathering, tools such as 'Check Sheets' can be effectively used.

Step 3: Principles for judging the alternatives

In this step, the baseline criteria for judging the alternatives should be set up. When it comes to defining the criteria, organizational goals as well as the corporate culture should be taken into consideration.

As an example, profit is one of the main concerns in every decision making process. Companies usually do not make decisions that reduce profits, unless it is an exceptional case. Likewise, baseline principles should be identified related to the problem in hand.

Step 4: Brainstorm and analyse the different choices

For this step, brainstorming to list down all the ideas is the best option. Before the idea generation step, it is vital to understand the causes of the problem and prioritization of causes.

For this, you can make use of Cause-and-Effect diagrams and Pareto Chart tool. Cause-and-Effect diagram helps you to identify all possible causes of the problem and Pareto chart helps you to prioritize and identify the causes with highest effect.

Then, you can move on generating all possible solutions (alternatives) for the problem in hand.

Step 5: Evaluation of alternatives

Use your judgement principles and decision-making criteria to evaluate each alternative. In this step, experience and effectiveness of the judgement principles come into play. You need to compare each alternative for their positives and negatives.

Step 6: Select the best alternative

Once you go through from Step 1 to Step 5, this step is easy. In addition, the selection of the best alternative is an informed decision since you have already followed a methodology to derive and select the best alternative.

Step 7: Execute the decision

Convert your decision into a plan or a sequence of activities. Execute your plan by yourself or with the help of subordinates.

Step 8: Evaluate the results

Evaluate the outcome of your decision. See whether there is anything you should learn and then correct in future decision making. This is one of the best practices that will improve your decision-making skills.

Conclusion

When it comes to making decisions, one should always weigh the positive and negative business consequences and should favour the positive outcomes.

This avoids the possible losses to the organization and keeps the company running with a sustained growth. Sometimes, avoiding decision making seems easier; especially, when you get into a lot of confrontation after making the tough decision.

But, making the decisions and accepting its consequences is the only way to stay in control of your corporate life and time.

ORGANIZATION PROCESS – ORGANIZATION STRUCTURE

Structure of an organisation which results from the organising process is the basic framework within which the decision-making behaviour of an executive takes place.

It is an established pattern of relationships among the components of the organisation. March and Simon have stated that “organisation structure consists simply of those aspects of pattern of behaviour in the organisation that are relatively stable and change only slowly.”

Some of the types of organizational structure are:-

1. Line Organization 2. Functional Organization 3. Line and Staff Organization 4. Committee Organization 5. Project Organization 6. Matrix Organization 7. Divisional Structure 8. Organic Structure 9. Simple Structure 10. Network Structure.

The following are the various types of organization structure:

1. Line Organization

2. Functional Organization

3. Line and Staff Organization

4. Committee Organization

5. Project Organization

6. Matrix Organization

The following analysis gives the nature, merits and demerits of these structures:

Type # 1. Line Organization:

It is also known as Scalar organization or Military form of organization. It is the oldest form of organization. Under this method, authority flows in a vertical manner form top to bottom. Each position in the structure has an authority over a lower position. Line executives are directly involved in the performance of the activities of an enterprise and are called the ‘doers’.

Line organization is of two types, viz., Pure Line Organization and Departmental Line Organization. Under pure line organization all perform same type of work at any level. On the other hand, under departmental line organization, each department performs different type of work.

Merits of Line Organization:

1. It is simple to understand and easy to establish.

2. Each individual knows clearly to whom he is responsible.

3. It provides unit of command.

4. It helps in taking quick and effective decisions.

5. It ensures personal contact between workers and manager.

6. It ensures discipline between the employees and employer.

Demerits of Line Organization:

1. There is concentration of authority at the top level. It leads to autocratic control.

2. Communication flows from top to bottom. There is no participation of workers.

3. It lacks specialization as a line manager is responsible for both planning and execution of work.

4. Overburdens the top executives and they cannot perform their work properly.

Suitability:

In spite of these limitations, it is suitable for small concerns where there are fewer levels of authority.

Type # 2. Functional Organization:

This concept was devised by F.W. Taylor. It is based on the functional foremanship. Under this method, the structure of the enterprise is classified into different functional areas. Each functional area is headed by a specialist who has full control of that function over the organization and gives instructions direct to the personnel, rather than through the chain of command.

Each chief manager is in charge of a particular activity. For example, chief finance manager is in charge of finance function of all the three units. Thus, he enjoys functional authority over the employees of other departments also.

Merits of Functional Authority:

1. It helps to reap the benefits of specialization

2. Subordinates can make use of the expertise of functional experts

3. The burden of top executive is reduced as each expert looks after only one function.

4. It leads to joint supervision by different experts

5. There is expert and better control can be exercised by functional experts

6. It provides better scope for expansion and diversification

Demerits of functional organization:

1. It is against the principle of unity of command as the subordinate is responsible to a number of superiors

2. Lower level people are not given an opportunity for all round experience and hence they do not fit into top level positions.

3. The complex nature of functional organization with its cross relationship creates a confusion among workers

4. The decision making is very slow as involvement of many experts is required

5. There is a scope of lack of coordination as each specialist thinks of only his function and ignores other functions.

Suitability:

It is suitable to all kinds of organization provided applied at higher levels. At lower levels too many cross relationship creates confusion throughout the organization.

Type # 3. Line and Staff Organization:

Line and staff organization is a combination of functional and line structure. Line authority flows from top to bottom and the line executive is directly concerned with the accomplishment of primary objectives. They are actual doers and generally do not possess specialized knowledge to solve complex problems.

To provide specialized assistance to line mangers, staff positions are created. Staff means a stick in the hand for support. Thus, staff helps the line executives in their work. They play the role of an advisor.

The other approach views that line and staff are two kinds of authority. According to this approach, line authority is defined as a direct authority which a superior exercises over his subordinates to carry out orders and instructions. The exercise of this authority is always downwards, that is, form a superior to a subordinate. Staff authority involves giving advice to line managers to carry on the operation. The flow of this authority may be in any direction depending on the need of such an advice. It is common that in actual practice, some variations may exist. The variations are more pronounced in the case of staff authority.

The distinction between line and staff though not rigid, is important because staff must be provided if the growing organization is to accomplish its goals. The differentiation between line and staff is necessary for the following reasons.

In line and staff organization, the line authority remains the same in the organization. But staff executives are attached with line executives who help them by providing necessary advice on important matters. Staff executives have no power to command subordinates in other departments.

It is clear that PA to Managing Director, Personnel Manager and Budget Manager play role of staff executives. In most business units, staff executives are used for collecting data required for taking decisions and to provide expert advice to line managers.

Merits of Line and Staff Organization:

a. This combination provides for specialized knowledge where staff executives guide and advise line executives.

b. It reduces the burden of line executives because staff carries on detailed investigation of each activity.

c. Better decisions are possible as expertise of the staff is used.

d. It is flexible in the sense that staff can be added to line executives.

Demerits of Line and Staff Organization:

I. Always it creates confusion as it is very difficult to define the authority relationship between line and staff.

II. Staff executives are not accountable and they may not take the tasks seriously.

III. There is always constant conflict between line and staff because the nature of their functions differs from each other.

Line and Staff Conflict:

Line and staff relationship implies that both are complimentary in nature. However, there are frequent instances of conflict between line and staff in the organizations, resulting in friction.

The various factor leading to line-staff conflict can be grouped into three categories as follows:

1. Apprehensions of line mangers,

2. Apprehensions of staff, and

3. Nature of line-staff relationship.

1. Apprehensions of Line Managers:

Line executives are the actual doers who responsible for the accomplishment of goals.

From their view point staff executives create conflicts in the following ways:

a. Lack of Responsibility:

Line executives feel that staff enjoy authority and lack responsibility. They are accountable. If anything goes wrong, they blame line executives, but assume credit for success. The imbalance between authority and responsibility leads to conflict between line and staff.

b. Encroachment of Line Authority:

Sometimes, instead of providing guidance and advice, staff may interfere with the work of line executives and try to force their recommendations on them leading to conflict.

c. Dilution of authority:

The introduction of staff makes the line executives to feel that their authority will be diluted. This fear of insecurity creates conflict.

d. Theoretical bias:

Staff executives are academicians. They provide ideas and suggestions which may, sometimes, lack practical application as they are away from the actual operational scene.

Apprehensions of Staff Executives:

Staff executives are experts in their area of operation and feel that it is line executives who are responsible for conflicts for the following reasons:

a. Lack of Proper Authority:

Staff executives feel that they lack proper authority to get their ideas implemented. It is left to the line executives either to accept or reject the advice given by the staff. They don't even consult while taking decisions. This creates frustration and leads to conflict.

b. No Proper Use of Staff:

Line executives do not make proper use of staff advice. Mostly they take decisions without consulting staff and communicate the same after it is implemented. Normally, line executives consult staff only as a last resort when they face a problem.

c. Resistance to New Ideas:

Line executives always resist new ideas. They do not like change and feel that new ideas are meant to find defects in their existing operations. This creates conflict.

Nature of Line-Staff Relationship:

The following defects lead to conflicts between line and staff:

a. Lack of Demarcation between Line and Staff:

Authority and responsibility relationship between line and staff is not clearly defined in most cases. This leads to overlapping activities and creates gaps in the relationship. This is one of the causes of conflict.

b. Different Background:

Staff executives are younger and better qualified. They often look down at line executives. This creates mistrust and hatred between them.

c. Lack of Proper Understanding of Authority:

As there is no clear cut demarcation between authority and responsibility there will be encroachment of each other's authority. Besides, the staff in order to get their suggestions accepted by line executives may approach common superior which frustrates line executives.

Resolving Conflict between Line and Staff:

The effectiveness of line people depends to a large extent on how they make use of staff. Staff people are needed in the organization because line people may not able to solve the problems which require specialized knowledge.

For making proper use of staff, following points are important:

(i) Staff people should be involved right from the initial stages of planning of an activity rather than when the problem becomes critical. When they are involved at the level of planning, many of the problems may

(ii) In order to make proper use of staff, they should not be kept busy in unimportant work-because it does not serve any meaningful purpose. Instead, they should be assigned critical work in the area other.

(iii) There should be encouragement and education to line people as to how to make maximum use of staff effectively. Line people cannot make use of staff unless they know what a specialist can do for them. At the same time, staff people also have a responsibility to let line people know how they can contribute for the better performance of line activities.

(iv) If line people take some actions directly affecting staff activities without consulting staff people, they should be informed immediately about such actions. The information will help in removing misunderstandings. If any, created in the minds of staff people.

Type # 4. Committee Organization:

A committee is a group of persons who consciously and deliberately formed to discuss a problem and provide solutions to overcome it. They meet on an organized basis to discuss and deal with the matter placed before it.

The following are the characteristics of a committee:

a. A committee is a group of people. There must be a minimum of two people and there is no limit for maximum.

b. The scope of committee is limited to the extent of task assigned to it.

c. Democratic principle of 'One man one vote' is followed

d. It may be executive committee or non-executive committee. Executive committee takes decisions and implements them. Non-executive committee only provides suggestions and recommendations.

Merits of Committee Organization:

1. Pooling of knowledge and experience- Knowledge and experience are pooled together to take joint decisions on the principle of two heads are better than one.

2. Motivation through participation- Members are allowed to participate in the decision making process. It makes them more committed to the decision.

3. Effective and proper coordination- Through coordination of experts bringing together diverse viewpoints many problems could be solved effectively.

4. Tool for management development- Every member has an opportunity for learning from the experience and mistakes of others. Thus it helps for management development.

5. Representation of diverse interest groups- When different interest groups are represented in a committee, conflicting views can be easily settled through motivation and participation.

6. Effective communication- By convening a committee any information can be easily passed on the all members of the organization.

7. Consolidation of authority- It enables management to consolidate splintered authority. This is helpful to a manager who has limited authority with which he cannot solve the problem without simultaneous exercise of authority by other managers related to the problem.

Demerits of Committee Organization:

The committee is one made of the unfit, selected by the unwilling to do the unnecessary.

The excessive or lack of use of committees creates problems to the management as follows:

a. It is costly and time consuming activity. The cost incurred is far below its benefits.

b. Committees do not help in taking quick decisions.

c. To arrive at unanimous decisions agreements are arrived at on the basis of a compromise which may not be really a right decision, Compromise is not the solution.

d. When unanimous decisions are taken by dominant members, a few persons may accept them under pressure.

e. Committees fix group responsibility where no individual can be made accountable. This leads to inefficiency.

f. Committee is a tool to misuse to delay or avoid or to take unpleasant decision.

Type # 5. Project Organization:

The use of the project organization has increased in the last few years. It is currently being employed in numerous undertakings engaged in the execution of construction activities, turnkey projects and research and development projects. The project organization can take various forms, but the important characteristic that distinguishes it from other forms is once the project is completed the organization is disbanded or phased out.

By definition, project management involves, "the gathering of the best available talent to accomplish a specific and complex undertaking within time, cost and quality parameters, following by the disbanding of the team upon completion of the undertaking".

The group members then go on to another project, return to their permanent home department in the organization, are given jobs elsewhere in the organization, or, in some cases, are phased entirely out of the firm.

Merits of Project Organization:

a. It allows maximum utilization of specialization

b. It is tailor-made to meet specific needs of a particular project

c. It provides more flexibility in handling resources by allocating them when they are needed.

Demerits of Project Organization:

I. It has a limited time and creates a feeling of uncertainty and insecurity among people in the organization.

II. Lack of proper vertical authority makes the job of a project manager difficult. He is responsible for the completion of the project but without authority over people in the project.

III. Undue influence of specialists from diverse field makes the decision making very difficult.

Type # 6. Matrix Organization:

It is a combination of project organization and functional organization.

"Any organization that employs a multiple command system that includes not only multiple command structure but also related support mechanism and an associated organization culture and behaviour pattern." — Paul R. Lawrence and Stanley M. Davis

It is clear from the above that matrix organization leads in overlapping of command, control and behaviour pattern.

Merits of Matrix Organization:

1. It focuses attention on a single project and facilitates better control.

2. It is more flexible than traditional organization

3. It provides motivation for the people engaged in a project

4. It leads to better utilization of services of professionals.

Demerits of Matrix Organization:

1. People receive instructions and order both from functional and project managers. Thus, it violates unity of command.

2. The complex relationship leads to confusion and makes coordination difficult. Subordinates are not in a position to identify their superiors.

3. In the absence of mutual trust and confidence, in sharing the resources and in taking joint decisions, conflicts arise.

4. As people are drawn from various departments, there is a lack of commitment and morale is low.

There are different structures, which can be given to an organization.

Some of the common types are:

1. Line Organization Structure

2. Line and Staff Organization Structure

3. Functional Organization Structure

4. Matrix Organization Structure.

1. Line Organization Structure:

This is the oldest as well as the most common type of organization. It is still used by many concerns especially the small ones. It is also known as the military system as this type of organization is usually found in the army.

In the line organization, the line of authority moves directly from the top level to the lowest level in a step-by-step manner. It is straight and vertical. The top-level management takes all major decisions and issues directions for actual execution. The general manager, for example, issues order to various departmental managers.

Thereafter, the departmental manager issues instructions to works manager. The works manager will issue instructions to foreman. In this manner, the orders and instructions will be issued to the workers working at the lowest level.

Thus authority moves downward and also step-by-step. The responsibility, on the other hand, moves in the upward direction. The authority is greatest at the top and reduces through each successive level down the organizational scale.

Some of the advantages of line organization structure are as follows:

i. Simplicity:

Line organization structure is easy to understand and followed by superiors and subordinates. It is simple and clear as regards authority and accountability.

ii. Prompt Decisions:

Line organization facilitates prompt decision-making at all levels as the authority given is clear and complete.

iii. Discipline:

It brings discipline in the organization due to unity of command, delegation of authority and direct accountability.

iv. Economical:

Line organization is economical as experts are not appointed.

v. Attraction to Talented Persons:

Line organization brings out talented workers and develops in them quality of leadership. It offers opportunities of self-development to employees,

vi. Quick Communication, High Efficiency, Flexibility and High Employee Morale are some more advantages of line organization structure.

Some of the limitations of line organization structure are as follows:

i. Heavy Burden on line Executives:

The line executives are given too many duties and responsibilities. Even the quality of the decisions of executives may suffer due to heavy burden of duties and responsibilities.

ii. Non-availability of Services of Experts:

There is absence of skilled experts in line organization. Expert assistance is not available promptly when needed by line executives.

iii. Favoritism:

There is wide scope for favoritism in the line organization. Leadership of departmental executive is autocratic due to heavy concentration of powers. He may favour some employees at the cost of others.

iv. Too Much Dependence on Limited Executives :

In the line organization, all powers are concentrated in the hands of a few executives. Naturally, the success and stability of the entire organization depends on their personal skill, initiative and interest.

v. Rigidity:

There is rigidity in the working of line organization.

vi. Delays in Communication, Limited Freedom to Employees and Un- suitability to Modern Large Business Units are some more demerits of line organization.

2. Line and Staff Organization Structure:

Though line structure is suitable for most organizations, especially small ones, it is not effective for larger companies. This is where the line and staff organizational structure comes into play. In line and staff organization structure, the line authority remains the same as in line organization i.e. it flows from top to bottom.

The main difference is that specialists are attached to line managers to advise them on important matters. Line managers are more involved in the core activities of the business.

They have little time to analyse all information for many decisions. They do not have expertise in all technical areas. Staffs are specialists, who help line authority in discharging their duties. Staff authority is used to support the line authority.

In most organizations, the staff is used for help in handling details, gathering data for decision-making, and offering advice on specific managerial problems. The staff investigates and supplies information and recommendation to managers who make decisions.

Line and staff structure has gained popularity because certain problems of management have become very complex and in order to deal with them, expert knowledge is necessary, which can be provided by the staff officers.

For example, a production manager (a line authority) does not have enough time and experience to handle labor relation problems. Staffs (who are specialists) help them in doing so. Similarly, finance, law, and public relations departments may be set up to advice on problems related to finance and accounting, law and public relations.

Some of the characteristics of line and staff organization are:

i. Planning and execution:

There are two aspects of administration in this organization, viz., planning and execution.

ii. Role of Authority:

The line managers have authority to take decisions as they are concerned with actual production. The staff officers lack such authority.

iii. Guidance from Staff:

The staff provides guidance and advice to line executives when asked for. Moreover, line executives may or may not act as per the guidance offered.

iv. Exercising Control:

The staff manager has authority over subordinates working in his department.

v. Scope for Specialization:

There is wide scope for specialization in this organization as planning work is given to staff and execution work is given to line executives.

vi. Possibility of Conflicts:

Conflicts between line and staff executives are quite common in this organization but can be minimized through special measures.

vii. Suitability:

Line and staff organization structure is suitable to large- scale business activities.

Some of the advantages of line and staff organization are:

i. Better Decision:

Staff specialists help the line executives in taking better decisions by providing them with expert advice adequate information of the right type at the right moment.

ii. Flexibility:

Line and staff organization is more flexible as compared to line organization as general staff can be employed to help line managers at various levels.

iii. Proper Weightage:

Many problems that are ignored or poorly handled in line organization can be properly covered in line and staff organization by the use of staff specialists.

iv. Reduction of Burden:

Staff specialists relive the line managers of the burden of concentrating on specialized functions like accounting selecting and training, public relations etc.

v. Specialized Knowledge :

Line managers get the benefit of specialized knowledge of staff specialists at various levels.

vi. Unity of Command:

Under this system, experts provide special guidance without giving orders. Since it is the line manager who only has the right to orders, the enterprises take advantage of functional organization while maintaining the unity of command i.e. one subordinate receiving orders from one boss only.

Some of the disadvantages of line and staff organization are:

i. Delay in Decision-making:

The process of decision-making is delayed, as line executives have to consult staff experts before finalizing the decisions. The decisions of line managers are likely to be delayed due to this lengthy procedure.

ii. Buck Passing Among Executives:

The line bosses are concerned with actual execution of work. However, they depend on staff experts for guidance. If something goes wrong, the attempt is made to pass on the blame by one party to the other. Thus, there is shifting of responsibility or buck-passing.

iii. Conflicts between Line and Staff Executives:

In this organization, quarrels and conflicts between line managers and staff specialists are quite common. The line managers are generally not interested in the advice offered by experts. Secondly, specialists feel that the line bosses lack knowledge of new ideas. Such conflicts lead to bitterness.

iv. Costly Organization:

Line and staff organization is a costly organization as the line executives are supported by highly paid staff executives who are experts. All this adds to the overhead expenses and the cost of production increases.

v. Complicated Operation:

Line and staff organization is too complicated in actual operation because of dual authority, division of functions and too much dependence on staff. The unity of command principle is violated.

vi. Internal Discipline is Affected Adversely:

The internal discipline is likely to be affected adversely due to decentralization and division of loyalty of subordinates.

3. Functional Organization Structure:

This structure is an extension of the line and staff organization. In this type of organization the employees are grouped together according to their similar tasks, skills or activities. All works of the same type are grouped together and brought under one department managed by an executive who is an expert.

Thus there are separate functional departments, for the major functions of the business e.g. engineering or production, purchase, sales, finance personnel etc. Each department performs its specialized function for the entire organization.

For example, the purchase department deals with purchases on behalf of the entire organization, and so on. Now-a-days almost all business concerns usually follow some sort of functional plan to carry out the primary functions of business. However, it is the rare to find a pure functional organization and there is always an element of line organization mixed with it.

Some of the advantages of functional organization structure are:

i. Facilitates specialization:

Functional organization structure facilitates division of work and specialization. Each boss has specialized knowledge of his functional area. He is in a better position to guide and help the workers.

ii. Benefits of large-scale operations:

Functional organization offers the benefit of economy of large-scale operation. In this organization, one administrative unit manufactures all products. The available machinery, equipment and facilities are used fully for large-scale production.

iii. Facilitates effective coordination:

Functional organization facilitates effective coordination within the function. This is possible as one boss is in-charge of a particular function and he looks after all activities, which come within that function.

iv. Operational flexibility:

Functional organization possesses operational flexibility. Necessary changes can be introduced easily to suit the needs of the situation without any adverse effect on the efficiency.

v. Ensures effective supervision :

Functional organization facilitates effective supervision by the functional heads and foremen. Due to specialization, they concentrate on the specific functional area and also keep effective supervision on their subordinates.

Some of the disadvantages of functional organization structure are:

i. Absence of Unity of Command:

Unity of command is absent in the functional organization as each worker gets orders and instructions from several bosses.

ii. Fixing Responsibility is Difficult:

In functional organization, responsibility is difficult to fix on a specific person. This is because the responsibility itself is divided among many.

iii. Unsuitable to Non-manufacturing Activities:

Functional organization can be introduced in the case of manufacturing activities. However, its application to non-manufacturing activities such as marketing, etc. has not been successful.

iv. Costly:

Functional organization is costly, as more specialists are required to be appointed.

v. Creates Confusion among Workers:

Functional organization is based on specialization as function is taken as a base for dividing the work. The authority is overlapping and the responsibility is divided. This confuses workers.

vi. Conflicts Among Foremen, Delays in Decision Making and Limited Discipline within the Departments are some more demerits of functional organization.

4. Matrix Organization Structure:

Matrix organization structure is a group or team that is formed on temporary basis for accomplishment of a given project. In matrix organization a project manager is appointed to coordinate the activities of a project. Persons are drawn from the various functional departments. Upon completion of project these people lay return to their original departments. Thus the functional staff has two bosses

The arrangement is found suitable where the organization is engaged in contractual project activities and there are many project managers, as in a large construction company or engineering firm.

Some of the advantages of matrix organization structure are:

i. Matrix structure focuses on a single project, permitting better control and planning to complete the project in a specified time period.

ii. It helps in development of persons by widening their scope and they can contribute maximum to organization.

iii. It improves motivation as people can focus on a particular project but in traditional structure it cannot happen.

iv. It also improves communication by discarding hierarchical system which is more time consuming.

Some of the disadvantages of matrix organization structure are:

i. It violates the principle of unity of command as there are two superiors a person has to work for. There may be rise of more conflicts.

ii. Informal relations are formed during matrix organization functioning and it may increase complexity in organizational relationship.

iii. Problems regarding appraisal may occur as employee works for two departments at a time.

iv. Costs can be increased if more managers (i.e. project managers) are created through the use of project teams.

1. Functional Structure:

Functional structure involves grouping of employee positions into departments as per the organisation's functions. Each department will have specialised and similar skills, expertise, work activities and resource use. This structure emphasises functional specialisation and active information sharing within each function.

For example- a CA with certain years of experience will be employed in the Finance department to manage the accounts of the organisation. Similarly, a scientist with diploma/degree in engineering and certain years of experience in Research & Development (R&D) will be employed in the R&D department to conduct research, testing and discovering new product designs in an organisation. This way, a functional structure will have employees with specialised functions and activities to perform depending upon the mission and objectives of the organisation.

Features of Functional Structure:

1. There exists a centralised authority that makes decisions for the organisation.

2. The structure involves standardised procedures for a standardised product/service provided by the organisation and availability of specialised and technical knowledge.

3. Jobs are specialised, organised and grouped under homogenous sub-groups or business units leading the efficiency among employees at all levels of the organisation.

4. The structure ensures that the organisation's product/service is produced at low costs.

Advantages of Functional Structure:

(i) In-Depth Development of Expertise:

Specialisation leads to focus on specific areas in order to gain productive efficiency within the entire organisational structure. Employees will be accordingly, managed by an authority with certain experience in that particular speciality. This person in authority can understand and review their subordinates' work and ensure high productivity in the business unit.

(ii) Clearer Career Path within Function:

Employees of similar skills can work cohesively with each other by teaching/training and guiding each other on a particular concentrated area. This may help employees to learn, develop and lead a growing career path.

(iii) Ease of Coordination within Function:

The chain of command is linear with every employee knowing their lines of communication within their teams, lines of communication between sub-units and the line of communication with the centralised authority. This makes coordination between employees easy.

(iv) Efficient Use of Resources:

Grouping of similar areas of expertise could entail efficient use of resources within an organisation. Equipment and personnel are not repeated across departments. Also, every business unit can easily communicate within and across business units facilitating efficient use of resources.

(v) Possible Economies of Scale:

Functional structure is believed to be effective for an organisation that provides a single product/service. The organisation correspondingly focuses on standardised procedures for providing a product/service with standard features, which ensures minimum costs of production. Minimum costs due to standardised features along with less margin of error can possibly lead to economies of scale.

(vi) Possible Competitive Advantage:

Competitive advantage refers to an attribute or advantage a business may have over its competitors, by generating high revenues or by garnering a higher market share.

This attribute could be either associated with a unique feature in their product or a lower costs of production.

Disadvantages of Functional Structure:

(i) Backlog of Decisions:

Backlog refers to accumulation of uncompleted work and with decisions concentrated at superior or top-level management could lead to possible losses and held responsible for possible profits or losses incurred by the organisation.

(ii) Problems during Sequential Tasks:

Employee groups organised in specialised units along the functional lines can be unaware or uninformed about activities in other units. This may lead to employees not being able to understand the priorities and/or initiatives of other work groups. This could further cause employees to place their department before the company's goals and to resent other business units.

(iii) Restricted Approach:

Functional structures are tight and not flexible or easily adaptable because they follow sequential tasks across departments. This creates bureaucracy (rigid rules and procedures) that limits any possible change within the organisation. When there are any shifts in the market, or changes in technology or innovation, such organisations take time to react as this information needs to travel across the chain of command. This rigidity within the structure may not be useful in dynamic environments.

(iv) Difficulty in Inter-Departmental Coordination:

Functional structure in large organisations can lead to complex inter-relationships within and between the departments. There are also possibilities of clashes and conflicts between departments. When the business faces real problems, the departments lose out the bigger objective of overall growth for the business due to possible miscommunication and unaccountability.

(v) Narrow Training but not Overall Development:

Each employee focuses on specialisation on one part of job rather than an all-inclusive training that can lead only to overall individual growth (personal and professional).

2. Divisional Structure:

Divisional structure is synonymous to decentralisation, which implies transferring powers of decision-making and accountability across employees or business units that are separate businesses within a broad organisational framework. Businesses in divisional structure operate autonomously and are grouped either on the basis of geographic locations, different customers segments they cater to products.

Departmentation based on geographic locations is common among businesses that operate over wide geographic areas. Activities in a given geographical area can be grouped and assigned to a manager or a senior subordinate. For example- Kirloskar Brothers Ltd. (KBL), which is one of the largest producers of industrial, project and agricultural pumps in India, have manufacturing plants in five different locations across Maharashtra, Madhya Pradesh, Tamil Nadu and Gujarat and plant managers in these plants may have been granted autonomous powers for operations. Additionally, KBL also has global presence in countries like Egypt, China, USA, etc., with supporting decision making powers to relevant subordinates in these countries.

Organisations can also group their activities in accordance to their customers' interests, tastes and preferences. Owners / Managers arrange business activities that can cater to the daily requirements of clearly defined customer groups. For example- KBL's, caters to different needs of their varied customer segments. They cater to specific customers in different industries like Building and construction, Power sector, etc.

Organisations with diverse product lines have product divisional structures. Such organisations require specialised efforts to produce quality-driven products defined by the markets. Accordingly, businesses require varied technologies for production along with diverse distribution systems.

For example- KBL offers multiple products under the 'Pumps and Pumping Solutions' like pumps, valves, hydro turbines etc. Product organisation structure can also exist among service companies like financial institutions who provide diverse financial products like mutual funds, banking services, insurance policies, etc., requiring different licenses, expertise and knowledge. Examples include HDFC, ICICI, etc.

Advantages of Divisional Structure:

(i) Accountability:

The resources for a particular product /service are deployed and concentrated on a single product/service or process under a single management (manager/groups). This makes the management responsible and accountable for the production (standardisation, procedures, etc.), distribution and sales of one or few related products. For example- Nestle’s Milk Products & Nutrition division will have a distinct management team responsible for the production, packaging, distribution and sales of milk and milk-related products.

(ii) Product Specialization:

Organisations with divisional structures are adaptable and can target specific customers through product specialisation. Each division focuses on specialised efforts on a particular product/service or market and employees in this division can shift the direction of their businesses to respond to changes in local conditions. For example- M & M Ltd. can possibly create a different division for Hatchbacks in different parts of the rural India where there are large number of nuclear families.

(iii) Local Decisions:

As decision-making in few areas is shifted or transferred from top management to divisional management, the divisional management can make decisions on improving working conditions in the business unit depending upon the changes in the local market conditions. The performance of the divisional management is evaluated on the basis of the performance of the overall business unit.

(iv) Multiple Offerings:

Divisional structure is most suited for businesses with complex, multiple and diverse product lines which converts a large organisation into smaller profit-centres.

(v) Speed:

Divisional units are able to respond easily and quickly with changes to the local market conditions. For example, during a slowdown in the local markets, a company in the Pune’s automobile cluster (in Maharashtra) had decided to operate the assembly plant on three out of six working days to avoid overhead costs and possible layoffs.

Disadvantages of Divisional Structure:

(i) Costs:

As specialised resources are targeted toward autonomous divisional units, each unit is designed to be self-sufficient. This may also lead to duplication of efforts because every business unit will have their independent supporting activities like accounting, HR, marketing, R&D, etc., leading to high costs.

(ii) Economies of Scale:

With possible duplication of efforts across divisional units, the organisation may be unable to operate under economies of scale. This however, can be attainable if the divisions may have integrated processes within their organisational framework. For example, Nestle India’s Instant food and Beverage units may have different processes but they can have an integrated mode of distribution/delivery to retail units.

(iii) Rivalries:

Self-sufficiency among autonomous divisional units can often lead to little or no communication with other units within an organisation. Divisional units can also put their own goals ahead of their parent company’s goals causing unnecessary rivalry and may become an obstacle to achieve the overall corporate goals.

(iv) Creation of Silos:

A silo literally means a tall tower used to store food-grains. Creation of silos in the context of management can be inferred as creation of several departments or groups in isolation from one another, which makes it difficult to communicate, share information or transfer skills and business practices across the organisation. It may also become to cross-sell products / services between the divisions.

(v) Conflicts and Diversion from Strategic Focus:

Rivalries and creation of silos can increase inter-departmental conflicts. Departments may argue about allocation of resources and support services requiring managers to efforts to sort out disputes among each other. The focus could get diverted to solving disputes rather than focusing on the overall organisational goals and disputes.

Most organizations are designed, or evolve, to have elements of both hierarchy and more flexible, organic structures within. Organic structures are more informal, less complex and more "ad-hoc" than hierarchical structures. They rely on people within the organization using their initiative to change the way they work as circumstances change.

Hierarchical Structure:

(i) Complexity- High- with lots of horizontal separation into functions, departments and divisions.

(ii) Formality- High- Lots of well-defined lines of control and responsibility.

(iii) Participation-Low- Employees lower down the organization have little involvement with influence on decision making.

(iv) Communication-Downward- Information starts at the top and trickles down to employees.

Organic Structure:

(i) Complexity – Usually lower- Less differentiation or functional separation.

(ii) Formality- Lower- No real hierarchy and less formal division of responsibilities.

(iii) Participation – Higher participation- lower level employees have more decision making.

(iv) Communication- Lateral, upward, & downward communication- Information flows through the organization with fewer barriers.

1. Functional Structure:

In a functional structure, functions viz. accounting, marketing, Human Resource etc. are quite separate; each led by a senior executive who reports to the CEO. The advantage can be efficiency and economies of scale where functional skills are paramount. The main disadvantage is that functional goals can end up overshadowing the overall goals of the organization.

2. Divisional Structure:

In a divisional structure, the company is organized by office or customer location. Each division is autonomous and has a divisional manager who reports to the company CEO. Each business unit is typically structured along functional lines. The advantage here relates to local results, as each division is free to concentrate on its own performance.

The disadvantage is that functions and effort may be duplicated. For example, each division may have a separate marketing function, and so risk being inefficient in its marketing efforts.

3. Organic Structures:

It includes simple, flat structures, matrix organizations and network structures.

4. Simple Structure:

Often found in small businesses, the simple organization is structure is flat. It may have only two or three levels; employees tend to work as a large team with everyone reporting to one person. The advantages are efficiency and flexibility, and responsibilities are usually clear. The main disadvantage is that this structure can hold back growth when the company gets to a size where the founder or CEO cannot continue to make all the decisions.

5. Matrix Structure:

In a matrix structure, people typically have two or more lines of report. For example, a matrix organization may combine both functional and divisional lines of responsibility. The advantage is that the organization focuses on divisional performance whilst also sharing functional specialist skills and resources.

6. Network Structure:

Often known as a lean structure, this type of organization has central, core functions that operate the strategic business. It outsources or subcontracts non-core functions which, depending on the type of business, could include manufacturing, distribution, information technology marketing and other functions.

This structure is very flexible and often can adapt to the market almost immediately. The disadvantage is inevitable loss of control; dependence on third parties and the complexity of managing outsource and sub-contract suppliers.

Staffing Process

It is a truth that human resource is one of the greatest for every organization because in any organization all other resources like- money, material, machine etc. can be utilized effectively and efficiently by the positive efforts of human resource.

Therefore it is very important that each and every person should get right position in the organization so as to get the right job, according to their ability, talent, aptitude, and specializations so that it will help the organization to achieve the pre-set goals in the proper way by the 100% contribution of manpower.

Steps involved in Staffing Process

1. Manpower Planning
2. Recruitment
3. Selection
4. Placement
5. Training
6. Development
7. Promotion
8. Transfer
9. Appraisal
10. Determination of Remuneration

Now, the process of Staffing can be explained in the following ways as follows-

1. Manpower Planning

Manpower planning can be regarded as the quantitative and qualitative measurement of labour force required in an enterprise. Therefore, in an overall sense, the planning process involves the synergy in creating and evaluating the manpower inventory and as well as in developing the required talents among the employees selected for promotion advancement

2. Recruitment

Recruitment is a process of searching for prospective employees and stimulating them to apply for jobs in the organization. It stands for finding the source from where potential employees will be selected.

3. Selection

Selection is a process of eliminating those who appear unpromising. The purpose of this selection process is to determine whether a candidate is suitable for employment in the organization or not. Therefore, the main aim of the process of selection is selecting the right candidates to fill various positions in the organization. A well-planned selection procedure is of utmost importance.

4. Placement

Placement means putting the person on the job for which he is selected. It includes introducing the employee to his job.

5. Training

After selection of an employee, the important part of the programmed is to provide training to the new employee. With the various technological changes, the need for training employees is being increased to keep the employees in touch with the various new developments.

6. Development

A sound staffing policy provides for the introduction of a system of planned promotion in every organization. If employees are not at all having suitable opportunities for their development and promotion, they get frustrated which affect their work.

7. Promotions

The process of promotion implies the up-gradation of an employee to a higher post involving increasing rank, prestige and responsibilities. Generally, the promotion is linked to increment in wages and incentives but it is not essential that it always relates to that part of an organization.

8. Transfer

Transfer means the movement of an employee from one job to another without increment in pay, status or responsibilities. Therefore this process of staffing needs to evaluated on a timely basis.

9. Appraisal

Appraisal of employees as to how efficiently the subordinate is performing a job and also to know his aptitudes and other qualities necessary for performing the job assigned to him.

10. Determination of Remuneration

This is the last process which is very crucial as it involves in determining remuneration which is one of the most difficult functions of the personnel department because there are no definite or exact means to determine correct wages.

Benefits of Staffing Process

The benefits of an effective staffing function are as follows-

- Staffing process helps in getting right people for the right job at right time. The function of staffing helps the management to decide the number of employees needed for the organization and with what qualifications and experience.
- Staffing process helps to improved organizational productivity. Therefore, through proper selection of employees in the organization, it can increase the quality of the employees, and through proper training, the performance level of the employees can also be improved.
- It helps in providing job satisfaction to the employees and thus keeps their morale high. With proper training and development programmer, the employees get motivation and their efficiency improves and they feel assured of their career advancements.
- It maintains harmony in the organization. Therefore with an overall performance of proper staffing in an organization, the individuals are not only recruited and selected and but as a result, their performance is regularly appraised and promotions made on merit which fosters harmony and peace in the organization for the accomplishment of overall objectives of an organization.

Recruitment

Recruitment is the process of acquiring a pool of candidates with the desired knowledge, skills, attributes and experience so you can select the right person who will assist your business to achieve its goals. Recruitment is based on three aspects:

- the needs arising from changes in your business (business restructure / employee retirement) or
- anticipated needs where you can predict personnel movement based on trends in the internal / external environment or
- unexpected needs (resignation, deaths, accidents, illness)

The five steps of recruitment are identify the vacancy; prepare job description and person specification; advertise the vacancy; manage the response and short-list applicants.

Selection

Selection is the process of interviews, reference checking and testing or assessment that assists you to ensure the best person is appointed; using effective, fair and equitable practices.

Selection is usually a series of hurdles or steps… each one must be successfully cleared before the applicant proceeds to the next step. The time, emphasis and sequence of steps will vary between organisations.

There are two steps in the selection process: identification of prospective applicants with initial short listing of applications and screening by way of interview and reference checks.

Career Development – Meaning

Career development is essential for implementation of career plan. While career plan sets career path for an employee, career development ensures that the employee is well developed before he moves up the next higher ladder in the hierarchy.

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Career development refers to a set of programmes designed to match an individual’s needs, abilities, and career goals with current and future opportunities in the organization. Since career development focuses on future opportunities, it has essentially a long-term orientation.

Career development differs from employee development through training and development in terms of time perspective. While career development has long-term orientation covering the entire work-life of an individual, employee development has immediate and intermediate-term orientation.

Therefore, some of the programmes may be common for those but their orientation may be different in terms of time perspective. For successful and effective career development, employee training and development should be compatible with an individual's career development in the organization.

CARRER DEVELOPMENT

When students complete their college education; they advance further into their maturity, and explore all possibilities to put themselves into a good position. They have to ready themselves by preparing a good resume, plan and attend job interviews, prove themselves that they are worthy to be hired.

When they are placed on the job, they enjoy their responsibilities, position at work and in life, make plans to move on. During this process they have their own intrinsic and extrinsic enjoyments. Then the time comes for retirement for which they have to plan also. Although the explanation looks simple and easy to accomplish, in real life, it is not so simple and easy to achieve or attain all those things mentioned earlier. Examine yourself and see what obstacles are there in going through this cycle of life and even plan to overcome the obstacles. Thus, ready yourself.

Generally organizations assess the annual performance of their employees for a number of reasons. These include, reward them for good performance or reprimand them for failing to meet their set standards. In addition to exercising these judgments, the employees are also taken through the promotional, de-motional, re-arrangement and replacement exercises. Some creative organizations engage in other kinds of exercises such as working out career plans, strategies, and development plans for their employees who indicate potential in order to keep their motivation sustained.

When it comes to whether retaining people or letting them go, organizations must engage in cost-benefit analysis. A section of human resource specialists may argue that it doesn't worth keeping the dead wood and it is better to let them go elsewhere. Instead, they can find better people in the market place.

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On the other hand, there are some human resource executives who strongly feel that it is worth spending time, money, and effort to set up plans for developing their current employees who are already cultured into their organizations. The approach may very well depend on the labor market situation and the availability of needed human resources.

When we look at the cost and benefit of these two choices, companies are more inclined towards retaining and developing their existing employees whose background is known and they are already cultured into the organization.

But the challenge remains as to how companies grow them to develop their potential or overcome their weaknesses. This is where career plans and development come handy. Companies may have to spend time and effort to design and develop such plans. These efforts are important ingredients in the human resource activities of World-class organizations.

Their performance and accomplishments have proven that such attitude helps them to produce the best results. Whether it is Hewlett-Packard, Microsoft, IBM, Tata, Siemens or General Electric, one may find the importance given to the career development of their personnel. A special kind of culture exists in these companies which nurtures the growth and development of personnel.

The Japanese companies have a different kind of culture and the breed of people which make the career development a way of life. When employees join an organization after their education, it is for life. When they make a choice to join an organization they take time. Once they join an organization, they have to stay with that organization for life. If they keep changing organizations, they will be looked down by their neighbours and society.

The Japanese culture and the corporate culture provide a background for fostering life-long career for the employee with the company. The employer and the employee understand this relationship and the rewards, promotions and retirement plans are all based on this understanding. Whether it is Western or Japanese companies, retaining, grooming, and sustaining the motivation of their employees occupy an important part of these organizations.

Career Development - Objectives and Importance

The main objective of career development is to ensure that people with appropriate qualifications and experiences are available when needed. Career development is an integral aspect of career management with major emphasis being on the enhancement of employees' career which commensurate with the requirements of the organisation.

The focus of career development is on the following:

(i) Obtaining relevant information about individual employees' interests and preferences;

(ii) Matching individuals' career interests and aptitudes to job requirements;

(iii) Providing career path information to employees to enable them to make their career plans;

(iv) Providing financial inducements and facilities to employees for acquisition of new skills and capabilities;

Career development refers to a set of programmes designed to match an individual's needs, abilities, and career goals with current and future opportunities in the organization. Since career development focuses on future opportunities, it has essentially a long-term orientation.

In this article we will discuss about career development in HRM. Learn about:- 1. Meaning of Career Development 2. Need for Career Development 3. Objective and Importance 4. Role of HRM 5. Stages 6. Initiatives 7. Methods 8. Programmes 9. Suggestions.

Career Development in HRM: Meaning, Need, Objective, Role, Stages, Initiatives, Methods, Programmes and Suggestions

Contents:

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Need of career development

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(ii) Matching individuals' career interests and aptitudes to job requirements;

(iii) Providing career path information to employees to enable them to make their career plans;

(iv) Providing financial inducements and facilities to employees for acquisition of new skills and capabilities;

(v) Developing a suitable T&D programme both within the organisation and outside to help employees improve their career.

Career Development – 5 Definite Stages: According to Biiehler

According to Biiehler, the five definite stages of development from the career guidance point of view are:

i. Stage of Growth until 13 Years:

This stage is regarded as the stage of fantasy. The individual has rapid physical and mental development and participates in all types of activities irrespective of whether it suits his abilities, temperament or not. He fantasies himself in future roles without considering whether he can actually accomplish them. He has still not developed his value system and a definite plan of action to forge ahead.

The need for guidance at this stage is most important in the area of development and adjustment. If for any reason, he feels thwarted or strangulated, it would permanently damage his personality, e.g., if parental attitudes are dominant or overprotective; or there is tremendous sibling jealousy, or there is unhealthy antagonistic environment at school. Guidance is also needed in the area of educational and professional development.

ii. Stage of Exploration:

This is the second stage of development from ages 13 to 25 and is called the tentative stage. By 13, the individual begins to show specialization as special abilities or aptitudes come into prominence. From the world of fantasy, he begins to settle down to a certain plan of action or shows consistency in his participation of activities, not randomly selected or visualizes an educational course which will lead him to his vocational choice and so on.

He begins to explore all opportunities coming his way and makes a choice, not out of sheer pleasure or fancy but out of careful considerations of what is possible for him or good for him.

Guidance is needed most in the adjustment area, as the individual enters adolescence and finds himself lost with the world around him. Most of the work of a guidance counselor is concentrated at this stage of development. If the individual is properly guided at this stage, his further development will be facilitated.

iii. Stage of Establishment:

This is the third stage in the development progress between the age group of 25 and 40 years, and it is called the realistic stage. By now, the individual is in a career and has completed formal training and education. He has to gain vocational development, adjustment and maturity.

Guidance may be required if the individual finds that his inter-personal relationship is not in order and is not able to get along with his colleagues or his boss. If he has developed sensitiveness to the miseries of the people around him and desires to do some civic or community service to the disturbed or the handicapped, he may ask guidance in the area and plan his time and energy to gain maximum satisfaction.

iv. Stage of Maintenance:

The fourth stage is referred to as a stage of stability, between ages 40 and 65. He has by now accomplished all what he needs to and has almost come to the stage of retirement. The guidance that he needs, at this stage is with regard to economic matters and leisure time. If he is dependent on his children, at this stage, he normally intends passing his time in religious activities and projects connected with religious institutions.

v. Stage of Decline:

This is the fifth stage, around the age of 65 to 75, when the adjustments become the most. Unless the individual has had a full, contented life, this period becomes one of trials and tribulations. The greatest need is to help the individual to feel that he is wanted, that he is still useful and that his family members care for him.

Also gradually, he needs to be prepared to face death and whatever his ailments be he has to learn to bear them with courage and cheerfulness till the very end.

Thus, we see that at each stage of development, guidance is required and is necessarily sought and if given systematically and scientifically it will help to make the individual fully satisfied and life worth living.

1. Career Planning Workbooks:

Workbooks are prepared by organizations to guide their employees individually through systematic self-assessment of values, interests, abilities, goals and personal development plans.

2. Career Planning Workshops:

a. Career workshops offer experiences similar to those provided by workbooks.

b. Workshops have the added advantage of providing a chance to compare and discuss attitudes, concerns and plans with others.

c. While some workshops focus on current job performance and development plans, others deal with life career plans and value.

d. Career workshops help people assume responsibility for their own career.

e. The workshops help the employees learn how to make career decisions, set career goals, and create career options.

f. Career workshops build confidence and self-esteem in employees.

3. Career Counseling:

It is the process of discussing with employees their current job activities/performance, their personal and career interest and goals, their personal skills and appropriate career development activities. Career counseling is usually voluntary. Career counseling may be provided by HR managers, line managers, specialized staff counselors or consultants outside the organization.

Enhancing Career:

Every employee should consider managing his/her career like an entrepreneur managing a small business. Employees must think of themselves as self-employed even if they work in a large organization. A successful career requires maintaining flexibility and keeping skills and knowledge up-to-date.

i. Knowing Oneself:

Every employee must analyse his/her strengths and weaknesses. They must list out what talents they can bring to an organization. Personal career planning begins by being honest with oneself.

ii. Managing One's Reputation:

Without over-doing one must let others, within organization and outside the organization, know about one's achievements. Accomplishments must be made visible.

iii. Building and Maintaining Network:

Contacts- Joining national and local professional associations, attending conferences and networking at social gatherings improve contacts.

iv. Keeping Current:

One must develop specific skills and abilities which are in high demand.

v. Balancing Special Competencies and General Competencies:

That is, being a specialist and also a generalist to have versatility to manage on ever-changing work environment.

vi. Documenting Achievements:

All achievements must be recorded with proof.

vii. Keeping One's Options Open:

One must also have contingency plans. Employees who are particular about career development must understand the cliché "Hope for the best but be prepared for the worst".

Career development consists of the personal actions one undertakes to achieve a career plan. The actions for career development maybe initiated by the individual himself or by the organisation.

These are discussed below:

1. Individual Career Development:

Career progress and development is largely the outcome of actions on the part of an individual.

Some of the important steps that could help an individual cross the hurdles on the way 'up' may include:

a. Performance:

Career progress rests largely on performance. If the performance is sub-standard, even modest career goals can't be achieved.

b. Exposure:

Career development comes through exposure, which implies becoming known by those who decide promotions, transfers and other career opportunities. You must undertake actions that would attract the attention of those who matter most in an organisation.

c. Networking:

Networking implies professional and personal contacts that would help in striking good deals outside (e.g., lucrative job offers, business deals, etc.). For years men have used private clubs, professional associations, old-boy networks, etc., to gain exposure and achieve their career ambitions.

d. Leveraging:

Resigning to further one's career with another employer is known as leveraging. When the opportunity is irresistible, the only option left is to resign from the current position and take up the new job (opportunity in terms of better pay, new title, a new learning experience, etc.). However, jumping too jobs frequently (job-hopping) may not be a good career strategy in the long run.

e. Loyalty to Career:

Professionals and recent college graduates generally jump jobs frequently when they start their career. They do not think that career-long dedication to the same organisation may not help them further their career ambitions.

To overcome this problem, companies such as Infosys, NIIT, WIPRO (all information technology companies where the turnover ratios are generally high) have come out with lucrative, innovative compensation packages in addition to employee stock option plans for those who remain with the company for a specified period.

f. Mentors and Sponsors:

A mentor is, generally speaking, an older person in a managerial role offering informal career advice to a junior employee. Mentors take junior employees as their protégés and offer advice and guidance on how to survive and get ahead in the organisation. They act as role models. A sponsor, on the other hand, is someone in the organisation who can create career development opportunities.

g. Key Subordinates:

Qualified and knowledgeable subordinates, often extend invaluable help that enables their bosses to come up in life. When the bosses cross the bridge, they take the key subordinates also along with them. In his own self-interest, the subordinate must try to find that winning horse on which he can bet.

h. Expand Ability:

Employees who are career conscious must prepare themselves for future opportunities that may come their way internally or externally by taking a series of proactive steps (e.g., attending a training programme, acquiring a degree, updating skills in an area, etc.).

2. Organisational Career Development:

The assistance from managers and HR department is equally important in achieving individual career goals and meeting organisational needs.

A variety of tools and activities are employed for this purpose:

a. Self-Assessment Tools:

Here the employees go through a process in which they think through their life roles, interests, skills and work attitudes and preferences. They identify career goals, develop suitable action plans and point out obstacles that come in the way. Two self-assessment tools are quite commonly used in organisations.

The first one is called the career-planning workshop. After individuals complete their self-assessments, they share their findings with others in career workshops. These workshops throw light on how to prepare and follow through individual career strategies.

The second tool, called a career workbook, consists of a form of career guide in the question-answer format outlining steps for realising career goals. Individuals use this company specific, tailor-made guide to learn about their career chances. This guide, generally throws light on organisation's structure, career paths, qualifications for jobs and career ladders.

b. Individual Counseling:

Employee counseling is a process whereby employees are guided in overcoming performance problems. It is usually done through face-to-face meetings between the employee and the counselor or coach. Here, discussions of employees' interests, goals, current job activities and performance and career objectives take place.

Counseling is generally offered by the HR department. Sometimes outside experts are also be called in. If supervisors act as coaches they should be given clearly defined roles and training. This is, however, a costly and time consuming process.

c. Information Services:

Employment opportunities at various levels are made known to employees through information services of various kinds. Records of employees' skills, knowledge, experience and performance indicate the possible candidates for filling up such vacancies.

For compiling and communicating career-related information to employees, organisations basically use four methods:

I. Job Posting System:

Job posting systems are used by companies to inform employees about vacancies in the organisation through notice boards, newsletters and other company publications.

II. Skills Inventory:

Skills inventories (containing employees' work histories, qualifications, accomplishments, career objectives, geographical preferences, possible retirement dates, etc.) are created to help organisations learn the characteristics of their workforces so that they can use the skills of their employees, whenever required.

Skills inventories also reveal shortage of critical skills among employees, which is helpful in tracing training needs.

III. Career Ladders and Career Paths:

Career paths and ladders throw light on career progression and future job opportunities in the organisation. They indicate a career plan complete with the goal, intermediate steps and time-tables for realising the goal.

Usually career paths for fast-track employees are laid down in most organisations outlining a series of career moves that these employees need to initiate in order to reach higher level positions.

IV. Career Resource Centre:

The career centre is a sort of library in the organisation established to distribute career development materials such as reference books, career manuals, brochures, newsletters and learning guides and self-study tapes.

V. Employee Assessment Programmes:

Employee assistance programmes help new recruits to adjust to the new work environment and colleagues. Such programmes include assessment centre, psychological testing, promotability forecasts and succession planning.

1. Assessment Centres:

A number of performance simulation tests and exercises (tests, interviews, in-baskets, business games) are used to rate a candidate's potential in assessment centre method. The performance on these exercises is evaluated by a panel of raters and the candidates are given feedback on their strengths and weaknesses. This feedback helps participants to assess where they stand and what is to be done to scale the corporate ladder in future.

2. Psychological Tests:

Diagnostic tests are used to help candidates determine their vocational interests, personality types, work attitudes and other personal characteristics that may uncover their career needs and preferences.

3. Promotability Forecasts:

This is a process of identifying employees with high career potential and giving them necessary training and thereby groom them for higher positions.

4. Succession Planning:

This is a report card showing which individuals are ready to move into higher positions in the company. The HR department keeps records of all potential candidates who could move into senior positions, whenever required.

VI. Employee Developmental Programmes:

These consist of skill assessment (explained above) and training efforts that organisations use to groom their employees for future vacancies. Seminars, workshops, job rotations and mentoring programmes are used to develop a broad base of skills as a part of such developmental activities.

VII. Career Programmes for Special Groups:

To take care of the needs of special groups such as dual career couples especially in knowledge based industries (a situation where both husband and wife have distinct careers outside the home) companies are coming out with schemes such as part-time work, long parental leave, child care centres, flexible working hours and promotions and transfers in tune with the demands of dual career conflicts.

Out placement assistance is extended to employees who are laid off for various reasons. In addition to holding workshops, outside experts are called in to show individuals how to focus on their talents, develop resumes and interview with prospective employers.

Special programmes are also organised for minorities, employees with disabilities, women and late-career employees so that they can have clear career goals and action plans in line with organisational requirements.

Career Development – Programmes

Career development programme consists of all those activities through which an individual's career is developed. Since both organization and individual make efforts for an individual's development, there are two perspectives- organizational and individual. Organizational perspective includes all those programmes which are organized and managed by the organization.

Individual perspective includes all those programmes which are managed by the individual himself. This is also known as self-development.

Following organizational programmes are relevant for career development:

1. Initial challenging tasks that enable employees to use their maximum possible competence.

2. Information dissemination to make employees aware about the working of the organization as a system.

3. Mentoring and coaching for continuous improvement of employees.

4. Training and development linked to career development.

5. Job rotation across the functional areas to appreciate functional linkages in the organization.

6. Allowing sabbatical and funding it to gain knowledge by the employees from outside the organization.

A. Career Counseling in Career Development Programme:

Counseling is interpersonal discussion with an individual who has a problem with emotional content in order to help him cope it better. Counseling has very wide application within and without organizational context. The basic objective of counseling in organizational context is to bring an employee back to his normal position from a position in which he is experiencing a problem or to enhance the self-image of the employee.

Career counseling is one of the several types of counseling that organizations adopt for betterment of their employees. Career counseling involves advising and guiding employees in their possible career paths and the direction in which they ought to be heading.

The need for career counseling arises when employees plan their careers and develop themselves for career progression in the organization.

The role of counseling in career development is as follows:

1. To Provide Guidelines for Self-Understanding:

One Chinese philosopher has said long back, “The most critical problem with us is that we don’t know ourselves. As a result, either we overestimate or underestimate ourselves.” Since employees are human beings, this statement holds good for them.

As a result, they tend to choose a career path and related development techniques which do not suit them or are not worthwhile for them in the long term. Career counseling tries to overcome this problem by suggesting them how to assess themselves objectively and what career paths and development techniques are best suited to them based on their strengths and weaknesses.

2. Develop Positive Thinking for Development:

Career counseling helps employees to develop positive thinking for development of their careers. Positive thinking refers to the persistent tendency to feel and behave in a favourable way towards any object or event including career development. With a positive thinking, employees may take various development programmes in a positive way. They may pick up the valuable contents from these programmes and, with positive thinking towards themselves, they will apply these contents to develop their careers.

3. To Help Employees to Understand Organizational Dynamics:

In an organization, there are forces and dynamics continuously operating in its day-to-day operations such as meetings, other forms of group discussion, informal get together, etc. These provide learning opportunities to employees. Employees can develop themselves if they are aware about how to capitalize these opportunities.

Through career counseling, employees can be equipped to use these organizational dynamics to develop interpersonal skills, communication skills, and cognitive skills which contribute significantly in the long-term success of the employees.

4. To Help Employees to Enjoy Greater Personal Satisfaction:

Workplace is most enjoyable provided one is ready to take it in right perspective. When it is not taken in right perspective, workplace is treated as one of the worst places; it remains only a place for earning livelihood, and not a place of learning and development.

Workplace is the best place of learning and development because most of the learning and development take place on the job. Career counselling helps employees to develop this approach by advising and guiding them how to derive maximum personal satisfaction out of the work performance.

In fact, the latest theory of job satisfaction is “job performance leads to satisfaction and better job performance leads to better job satisfaction.” When career counseling makes employees to understand it, it works as an energizer. The process is-performance leads to satisfaction and energizes for better performance; this induces to develop skills for better performance. This progression continues throughout the life.

B. Groups Needing Special Attention in Career Development Programme:

There are some groups of employees who need special attention in career development programme. These groups of employees are as follows- (i) woman employees, (ii) dual income families, (iii) scheduled caste/tribe employees, (iv) late career employees (v) ex-servicemen, and (vi) differently abled personnel.

These groups of employees need special attention in career development programme because they differ from other employees depending on the group to which they belong.

(i) Woman Employees:

Throughout the world, there is increasing role of woman employees, both in managerial cadre as well as in non-managerial cadre. In India too, this phenomenon is taking place.

Woman employees face the following types of problems at the workplace:

1. There is sexual harassment of woman employees at the workplace. According to Equal Employment Opportunity Commission (EEOC), USA, any unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct of a sexual nature constitute sexual harassment when- (i) submission to such conduct is made, either explicitly or implicitly, a term or condition of employment; or (ii) submission to or rejection of such conduct by an individual is used as the basis for

employment decisions affecting such individual; or (iii) such conduct has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile, or offensive working environment.

2. Another kind of problem that woman employees have to face is in the form of prejudices against woman employees. Though our Constitution provides that there will not be any discrimination on the basis of caste, creed, sex, or birth place, prejudices against women exist in the society as well as at workplaces. This is because of masculine or male-dominated society. A masculine society defines gender roles in more traditional way.

While the above problems are relevant for woman employees throughout the world, Indian woman employees are likely to face these problems more critically as India is a gender-biased nation. According to Gender Gap Index report 2016 prepared by World Economic Forum, India has only 68.3 per cent gender equality ranking 87th in the world.

On the four parameters taken for identifying gender equality — woman state head, political empowerment, educational empowerment, and economic participation and opportunity, India is still worse in terms of economic participation and opportunity. The economic parity index is based on four parameters — labour force participation, wage equality for similar work, senior officials and managers, and professional and technical workers.

Because of this gender inequality, Indian woman employees are likely to face tougher situation at the workplace as compared to their counterparts in developed countries with lesser gender inequality. In the light of this situation, they need special attention in career development programme.

This attention can be put on the following aspects:

1. Woman employees should be educated to fight against sexual harassment and male prejudices. This can be done through well-directed counseling.

2. Woman employees should be given career paths that do not require high degree of travelling and working late night/or throughout the night shift.

3. Woman employees should not be engaged in those careers which involve high physical risk like fire-fighting, hazardous machinery, etc.

4. The organization should develop a culture that provides equal status to women and men based on their performance. There should be equality of treatment based on performance and other objective criteria and gender should not come in the way.

(ii) Dual Income Families:

A dual income family, also known as double income or dual career family, is one in which both husband and wife are working personnel, either in the same organization or in different organizations.

In dual career families, where both husband and wife are working on full-time basis, there are two types of problems:

1. There is a problem in making adjustment in personal life and work life of spouse. The question is- if both are working, who will look after the household activities including taking care of children? Traditionally, this is the responsibility of woman more than counterpart because of the traditions practised through ages. Household responsibility often produces conflict between personal life and work life.

2. Since both are careerists, each of them over-emphasizes his/her career. As a result, there is a possibility of ego clash between them.

In the light of the above problems, dual career families need special attention in career development programme which can be on the following aspects:

1. If the spouse is working in the same organization, attempt can be made to engage both of them in compatible career paths. The compatibility in career paths may enable them in better management of their careers as well as the family affairs. If both are working in different organizations, they may be counseled to choose compatible career paths.

2. The spouse may be guided to develop interpersonal skills and empathy to appreciate the viewpoints of each other. This may reduce the anxiety for managing both careers and family affairs simultaneously.

3. To the extent possible, flexi-time or remote working system involving telecommuting should be adopted. This system will provide opportunity to members of dual career family to adjust their work and personal time suitably.

(iii) Scheduled Caste/Tribe Employees:

There is increasing emphasis on recruiting persons belonging to scheduled castes/tribes and economically and socially backward communities. In public sector, certain percentage of positions is reserved for such persons through legal provisions. In private sector, there is a move to put emphasis on recruiting persons belonging to such communities.

Persons belonging to such communities face the following types of problems at the workplace:

1. Persons belonging to scheduled castes/tribes are perceived as inferior as compared to other employees doing the similar jobs. The basis of perception of inferiority emerges because of lower scores of these persons in selection tests and other quantitative criteria.

2. There is a likelihood of class conflict between scheduled caste/tribe employees and other employees at the workplace. Therefore, the interpersonal interaction between two groups of employees may not be as cordial as it should be.

In the light of the above problems, scheduled caste/tribe employees should be given special attention in career development programme which can be on the following aspects:

1. Scheduled caste/tribe employees should be given additional opportunities and facilities to learn and develop skills which can put them at par with other employees. The efforts should be made to bridge the gap between two groups of employees.

2. Apart from the development of interpersonal skills, high emphasis should be placed on the development of skills in scheduled caste/tribe employees to manage inter-group behaviour, conflict, and cooperation.

(iv) Late Career Employees:

Some persons start their regular career late as compared to other employees in the same career. This may happen due to a variety of reasons like switching from a temporary career to regular career, discontinuation of studies because of personal, family, and other reasons and pursuing these subsequently, etc. Those persons who start their career late are known as late career employees.

Such employees face the following problems at the workplace:

1. Late career employees fall in higher age group as compared to other employees who have started their career well in time. Because of this difference, there is some kind of incompatibility between late career employees and other employees. This may affect interpersonal relationships between them.

2. The previous background of late career employees may put them in adverse situation to meet the requirements of their present career. If their previous career is not compatible with the present one, making adjustment with the present career becomes even more difficult because the way of working in the previous career interferes with that of the present career.

In the light of the above problems, late career employees should be given special attention on the following aspects in career development programme:

1. If late career employees have learned something which is incompatible with their career, they should be counseled and guided to forget this. After all "as important it is to learn for the future, it is equally important to unlearn the past and remove its baggage." With this kind of unlearning, late career employees can learn what is required for being successful in their career.

2. Late career employees should be given emphasis to align their attitudes in line with the requirements of workplace. If they have inferiority complex that they are over-aged to learn the new skills or they are elder in their group and, therefore, more experienced and knowledgeable, such attitudes need to be changed. Such attitudinal change may put late career employees to see the things in right perspectives.

3. In many cases, late career employees are not expected to reach at the top of a career ladder. In such a situation, either late career employees should be put on a

career path involving lesser number of ladders or they should be made to realize the reality of the situation that making at the top is not quite feasible for them. When late career employees realize this, they may not develop frustration unnecessarily.

(v) Ex-Servicemen:

Servicemen are the people who are employed in defence — military, air force, and navy. On the basis of their ranks, they may be classified into three categories—operatives, junior commissioned officers, and commissioned officers. Recruitment in defence takes place at two stages — operatives and commissioned officers. Some operatives are promoted as junior commissioned officers depending on their performance and promotability.

In the category of commissioned officers, there are two types of openings — short service commissioned officers and regular commissioned officers. Regular commissioned officers continue in the service for a long time while short service commissioned officers are appointed for a specified term, normally ranging between 5 to 15 years depending on the policy of recruitment applicable at the time of recruitment.

All defence personnel are known as ex-servicemen after their retirement. However, officers retiring as short service commissioned officers and some categories of operatives tend to seek further employment in non-defence sector as they have long years to go in their life.

When such ex-servicemen join an organization, they face the following types of problems at the workplace:

They are oriented to a career whose demands are quite different from the demands of the career they join afresh. Such difference may be in nature of job performed and nature of work environment. Therefore, they tend to experience difficulties in the new career.

Often, there is a mismatch between what they have learned and used in their defence career and what they ought to learn and use in the new career.

Like late career employees, they do not have enough time to learn and equip themselves to face the reality of the new situation. As a result, they do not have ample time for experimentation.

In the light of the above problems faced by the ex-servicemen, they need special attention on the following aspects in career development programme:

1. There is a need for aligning the past career of ex-servicemen with the proposed career. This alignment can be in two ways- (a) they are given a career which is quite similar to their past career, for example, if an ex-serviceman has worked in telecommunications, he should be given this kind of work; (b) where this is not possible, an ex-serviceman should be engaged in a job which has some kind of matching with his past career such as security personnel with a provision of progression to higher level like security officer, security manager, and so on.

2. There is a need for changing the work styles of ex-servicemen in the light of the requirements of the new situation. They are used to work in highly authoritative structure with high emphasis on superior-subordinate differentiation, highly formal structure, and high level of routines. In the new situation, they may not encounter with such features. Therefore, their total approach of working has to be changed through behavioural programmes.

3. Like late career employees, ex-servicemen have certain limitations for vertical movement. This phenomenon should be emphasized so that they do not live on false hopes. Through behavioural training, this problem can be overcome.

(vi) Differently Abled Personnel:

Differently abled personnel (physically impaired/handicapped personnel) are those who have some physical disadvantages as compared to other personnel. They are also known as physically handicapped personnel. Physical disadvantages may be in the form of lameness, hand problems, or any other deformity.

Such a feature may exist either at the time of birth of these personnel or they may have been injured in accidents. Whatever the reasons may be, these physically impaired personnel cannot work like normal personnel.

Therefore, they face the following types of problems at the workplace:

1. Differently abled personnel cannot perform those jobs, either efficiently or at all, which require the use of those organs which are weak. For example, a lame cannot undertake journey comfortably.

2. Since physical impairment is a kind of physical deficiency, it can lower the self-concept of physically impaired personnel unless they develop strong will power to overcome this feeling.

In the light of the above problems, physically impaired personnel need special attention on the following aspects in career development programme:

1. Differently abled personnel should be put on career paths that do not require high physical exertion; they should be put on career paths which can use special skills developed by physically impaired personnel to compensate for their physical disadvantages.

2. Differently abled personnel should be counseled to overcome their mental inhibition which may exist in them because of physical disadvantages. Once they overcome this mental inhibition, they can use their special skills more effectively.

The various important suggestions for effective career development are:

(i) Challenging Initial Job Assignments – There is evidence indicating that employees who take up initial challenging jobs perform better at later stages.

(ii) Dissemination of Career Option Information – Mostly, employees lack information about career choices/options. The managers identify career paths and succession paths. This information should be made available to all employees concerned.

(iii) Job Positioning – Management should provide job information to employees through job positioning. For posting the jobs organisations can use bulletin board displays, company publications, electronic billboards and similar means.

(iv) Assessment Centres – The assessment centres evaluate the people regarding their ability to certain jobs. This technique helps to identify the available skills, abilities and knowledge.

(v) Career counseling helps employees in setting directions, reviewing performance, identifying areas for professional growth.

The content of career counseling includes:

(a) Employee's goals, aspirations and expectations with regard to future career,

(b) The manager's views about the future opportunities,

(c) Identification of employee's attempts for self-development.

(vi) Career Development Workshops – Managements should conduct career development workshops. There workshops help for resolving misperceptions. Entry workshops help for orientation and socialisation activities. Mid-career workshops help the employees with the same background and length of service. Late-career workshops are helpful for the employees preparing for retirement, employees who are frustrated over unfulfilled career goals.

(vii) Continuous education and training help the employees to reduce the possibilities of obsolete skills. In fact, continuous education and development are highly essential for career planning and development. Competency- based training approaches are best for career development.

(viii) Periodic Job Changes – In the modern business, the proverb, "rolling stone gathers no moss" has a little relevance. In fact, the rolling stone gathers moss. The technique of job rotation helps the employees to acquire the organisational Knowledge, and Knowledge about different jobs and departments.

Ultimately, the employee gains confidence of working efficiently under any environment. The periodic job changes offer diverse and expanded range of experiences that the future job will demand. Thus, this technique prepares the employee for the future careers.

Solution to the Career Problems:

Employees can minimise the problems by- (a) improving the dissemination of career information in order to help the early process of career choice, (b) improving mechanisms for people to discover their own talents, needs and motives, (c) improving mechanism for career switching, and (d) introducing necessary educational facilities.

The organisation can also minimise the problems by (a) improving human resources planning and forecasting systems, (b) improving dissemination of career option information, (c) initiated career counseling, (d) developing effective internal and external assessment centres, (e) supporting educational and training programmes, (f) introducing more flexible reward and promotional systems and conducting career development sessions.

PERFORMANCE APPRAISAL & TRAINING

Creating training and development tools to ensure that managers conduct performance appraisals effectively involves designing the process, training employees on how to use the tools, training managers on how to provide feedback and set performance goals while adhering to legal guidelines, distributing resources including instructions and monitoring the whole process. Comprehensive performance appraisal training and development enable organizations to validate that their employees have the right skills and knowledge to complete job tasks and produce quality products and services.

Features

Training and development activities designed to support an effective performance appraisal process involve establishing an ongoing communication process between employees and managers. Learning how to define job responsibilities, competencies and performance measures ensures the performance appraisal process works to improve employee achievement.

Benefits

An effective performance appraisal process aids management in decision-making processes associated with promotion, discipline and salary administration activities. Dealing with performance problems promptly avoids long-term issues, including legal liabilities. Designing a customized performance appraisal program and training staff on its use ensures performance criteria apply appropriately. Improved employee performance reduces costly mistakes, increases productivity and motivates all personnel to achieve strategic goals.

Types

Workshops and short sessions typically provide enough time to deliver key concepts about performance appraisal processes. Distance learning alternatives allow employees located at different facilities to participate in the same session. Events can be recorded and archived for future access. In this way, all employees hear the same consistent message.

Topics

Performance appraisal training and develop sessions for managers typically cover what to say when conducting a performance review. Through role-playing exercises, managers learn to use clear communication that conveys any goals that need adjustment to changing strategic objectives. Managers learn to reinforce the need for improving skills to enable high performance. Managers also learn to encourage and reward employee strengths.

Expert Insight

Performance appraisal training should emphasize that employees are encouraged to take on more complex roles. Gaps in training should lead to development or procurement of those courses to develop those skills. Employees should be given definitive recommendations on how performance can be improved, such as starting or stopping certain behaviors. Creating a positive relationship with employees regarding performance improvement builds trust, and enables growth and development that benefits the company as a whole.

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UNIT III

Direction and Control: Motivation process and theory – Leadership – Leadership style. Communication – process and methods – barriers, coordination – features and Techniques, Control process and methods.

MOTIVATION

Motivation is the process of channelling a person‘s inner drives so that he wants to accomplish the goals of the organization. Motivation concerns itself with the will to work. It seeks to know the incentives for the work and tries to find out the ways and means whereby their realization can be helped and encouraged.

Characteristics of Motivation

The following are the important characteristics and nature of motivation

1. Motivation is an internal feeling – Motivation is a psychological phenomenon which is a force within an individual that drives him to behave in a certain way.

2. Motivation produces goal-directed behavior – An individual‘s behavior is directed towards a goal.

3. Motivation is related to needs – Needs are deficiencies which are created whenever there is a physiological or psychological imbalance.

4. Motivation can be positive or negative – Positive or incentive motivation is generally based on rewards. Negative or fear motivation is based on force and fear.

5. Motivation is a continuous process – Satisfaction of human needs is a never ending process. It is a continuous process. So motivation is also a continuous process.

6. Motivation is dynamic – Needs of a person today may be different from needs of tomorrow. So motivation is highly dynamic.

Importance and benefits of Motivation

Motivation is an effective device in the hands of a manager for inspiring the work force and creating confidence in it. By motivating the work force, management can achieve the organizational goals. The various benefits of motivation are

1. A manager directs or guides the workers‘actions in the desired direction for accomplishing the goals of the organization by motivating the workers.

2. Workers will try to be efficient as possible by improving upon their skills and knowledge so that they are able to contribute to the progress of the organization.

3. Ability to work and willingness to work are necessary for performing any task. These two things can be created only by motivation.

4. Motivation contributes to good industrial relations in the organization.

5. Motivation is the best remedy for resistance to changes. If the workers of an organization are motivated, they will accept any change whole-heartily for the organizational benefits.

6. Motivation facilitates the maximum utilization of all the factors of production and thereby contributes to higher production.

7. Motivation promotes a sense of belonging among the workers.

8. Motivation leads to lower turnover and absenteeism because a satisfied employee will not leave the organization.

MOTIVATION PROCESS

Process of Motivation

The process of motivation starts with the need which may be the perception of deficiency in an individual. For example, an employee in the organization considers the need for higher pay, more challenging work, for time off etc. These needs influence the thought processes of employee that directs him to satisfy the needs by adopting a particular pattern of action. In case the selected course of action of an employee leads him towards expected results in the form of reward than he will definitely be motivated by the similar reward to give the same performance in the future. On the other hand, if the anticipated rewards are not resulted by adopting a certain line of action, then the employee would not be likely to repeat his behavior. So the rewards of certain action, act as a feedback mechanism that supports the employee to evaluate the consequences when he is considering his future action.

Phases of Process of Motivation

Following are the basic phases of the process of motivation.

1. Need Identification

In the first phase of the process of motivation is the employee feels certain need that is unsatisfied & hence he identifies that need. Then the unfulfilled need stimulates the employee to search certain goal by creating tension in him. This tension acts as driving force for the accomplishment of the set goals which can satisfy the tension creating need.

2. Exploring Ways to Fulfill the Need

In this phase of the process of motivation, different alternative ways are explored that can satisfy the unsatisfied need that is identified in the first phase. In fact the unsatisfied need stimulates the thought processes of the employee that direct him to adopt a certain course of action.

3. Selecting Goals

In the third phase of the process of motivation, the goals are selected on the basis of identifying needs and alternative course of actions.

4. Performance of Employee

In the fourth phase of **Motivation Process**, the identified need stimulates the employees perform in a certain way that has already been considered by him. So the employee performs certain course of action to the satisfaction of unsatisfied need.

5. Rewards/Punishments as Consequences of Performance:

If the consequences of the particular course of action followed by an employee are in the form of rewards, then the employee would be motivated to perform the same level of efforts for acquisition of similar rewards in future. Whereas when the anticipated results of the actions of an employee lack the rewards, then he would not be willing to repeat his behavior in the future.

6. Reassessment of Deficiencies of Need

When an employee feels satisfaction for his certain unsatisfied need through the rewards of a certain line of action, then he again reassesses any further unsatisfied need and resultantly the whole process is repeated again.

Theories of Motivation

There are many internal and external variables that affect the motivation to work. Behavioral scientists started to search new facts and techniques for motivation. These are called as motivation theories. The most important theories are

1. Mc Gregor's Theory X and Theory Y

2. Herzberg's Two Factor Theory

3. Maslow's Need Hierarchy Theory

4. Mc Clelland‘s Achievement Theory

LEADERSHIP

Leadership is an activity on the part of the managers to get something done by others, willingly and not by compulsion. Leadership is a process of influence on a group. Leadership is the ability of a manager to induce subordinates to work with confidence.

In the words of Koontz and O‘ Donnel, ―leadership is the ability of a manager to induce subordinates to work with confidence and zeal.‖

According to Chester I Bernard, ―leadership refers to the quality of the behavior of individual whereby they guide people on their activities in organized efforts‖

According to Luis A Allen, ―a leader is one who guides and directs other people. He gives the efforts to his followers a direction and purpose by influencing their behavior‖

Thus leadership is a psychological process of influencing followers and providing guidance, directing and leading the people in an organization towards attainment of the objectives of the enterprise.

Nature or Characteristics of Leadership

1. A leader should have followers

2. leadership is basically a personal quality

3. leadership involves a community of interest between the leader and his followers

4. leadership is a process of influence

5. leadership is the function of stimulation

6. A leader ensures absolute justice

7. Leadership is a continuous, dynamic and ever evolving process.

1. Autocratic Leadership

Autocratic leadership is also known as authoritarian, directive, leader centered or monothetic style. Under this style, leader concentrates all authority in himself, instructs a subordinate as to what to do, how to do it, when to do it etc. He also exercises close supervision and control over his subordinates. There are three categories of autocratic leaders

2. Participative Leadership

This style is also called as democratic, consultative, group centered or ideographic style. A participative leader is one who consults and invites his subordinates to participate in decision making process. Under this style, subordinates are freely allowed to communicate with the leader and also with their fellow subordinates and take their own initiative.

3. Laissez Faire or Free-rein Leadership

Under this style of leadership, the leader largely depends upon the group and its members to establish their own goals and make their own decisions. The leader is passive and assumes the role of just another member in the group. Only very little control is exercised over group members. This style is also known permissive style of leadership. This style is suitable to certain situations where the manager can leave a choice to his groups.

Communication

- Process through which people and organizations accomplish goals

- Through communication we share:Attitudes Values, Emotions, Ambitions, and Wants Needs.
- Successful communication is well planned and thoughtfully executed
- Failed plans are often the result of failed attempts at communicating.
- Communication can avoid waste and confusion.

Communication Process

Communication is transmission of information

- The goal is common understanding.
- Sender = the initiator of communication.
- Receiver = the person or group who gets the communication.
- Message = the information that is transmitted.
- Medium = channel or means chosen by the sender to transmit the message.
- Feedback = information from receiver showing how they received sender's Message.

Barriers To Effective Communication

Barriers to communication are factors that block or significantly distort successful communication. Effective managerial communication skills helps overcome some, but not all, barriers to communication in organizations

CONTROLLING

The Control function is closely related with all other functions of management. The management control is the process of ensuring that the actual plan implementation matches with the original plan. It is an ongoing and dynamic function and linked with other function of the management in a circular relationship.

Definition

According to KoontsO'Donnel, ―Controlling is the measurement of accomplishment against the standards and the correction of deviation to assure attainment of objectives according to plan.‖

Steps in Control Process

The control process involves four basic steps as mentioned below:-

1. **Establishing standards:-** Standard represents criteria of performance. This implies thestatement of goals and objective envisaged under the planning process are stated in clear and measurable terms along with specific milestones. The standard should have some characteristics to produce effective performance.

2. **Measurement of performance against standards**: The measurement of performance is anongoing process. Several techniques are used by the management to measure the performance.

3. **Comparing the actual performances with standards**: The measured results are comparedwith the project and standards. In case the performance meets the standards, then it would mean that the performance or activity is progressing in the desired direction.

4. **Taking corrective action**: In the situations when performance does not confirm to thespecified criteria of the standards, then it is necessary to take corrective measures to deal with the observed deviations in the performance.

OTHER METHODS OF CONTOL

Self-control: Each employee must exercise self-control and do what is expectedat work most of the time on most work related matters, as no enterprise can existself-control. Self-control stems from the employee’s ego, orientation, training and work attitudes.

Group control: It affects individuals both in output and behaviour. Group norms ofdoing a good job exert pressures on the individual to perform and to follow work rules.

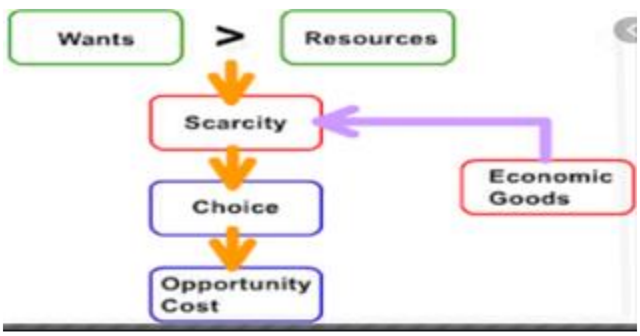
Policies and procedures: They are guides to action for managers to use incontrolling behaviour and output of employees. They can, for example, protect the firms's resources and equipment and require employee's presence for appropriate work times.

UNIT-4

Basic economic concept-Importance of economic in engineering-Economic and technical decisions-Demand and supply-Factors influencing demand-Elasticity of demand-demand forecasting-Competition.

BASIC ECONOMIC CONCEPT

- The Father of Economics is "ADAM SMITH" (1723-1790).
- He wrote a famous book called "An Inquiry into the Nature and Causes of the Wealth of Nations".
- The basics of Economics are
    - Scarcity
    - Demand and Supply
    - Cost and Benefits



- Scarcity refers to our limited resources and our unlimited wants and needs.
- For an individual, resources include time, money and skill.

- For a country, limited resources include natural resources, capital, labour force and technology.
- It is the most basic concept in economics, and it is more of a solid fact than any abstraction.

IMPORTANCE OF ECONOMIC IN ENGINEERING

- Economics is the important you get to know how societies, governments, businesses, households, and individuals allocate their scarce resources.
  The economics can also provide valuable knowledge for making decisions in everyday life. Economics is concerned with the optimal distribution of resources in society.

ECONOMIC AND TECHNICAL DECISIONS

- Economic decisions are those decisions in which people (or families or countries) have to choose what to do in a condition of scarcity. ... This means that people have to make economic decisions because they want more things than they can actually get. Therefore, they have to choose between various options.
- Wrapping Up. In conclusion, we can say that making technical decisions is a balancing act where the following factors need to be considered: The size and gravity of the problem we are trying to solve. The risks associated with the implementation of a particular solution.
- The lesson introduces a five-step process for decision-making that can be used to make all kinds of decisions. The steps are:
  - 1) Define the problem
  - 2) Identify possible alternatives
  - 3) Develop criteria and a ranking system
  - 4) Evaluate alternatives against the criteria
  - 5) Make a decision.

DEMAND AND SUPPLY

- Supply and demand, in economics, relationship between the quantities of a commodity that producers wish to sell at various prices and the quantity that consumers wish to buy.
- It is the main model of price determination used in economic theory.
- The law of supply and demand is a theory that explains the interaction between the sellers of a resource and the buyers for that resource. ...
- Generally, as price increases people are willing to supply more and demand less and vice versa when the price falls.
- Equilibrium is the point where **demand** for a product equals the quantity supplied. This means that there's no surplus and no shortage of goods. A shortage occurs when **demand** exceeds **supply** – in other words, when the price is too low.
- These are examples of how the law of supply and demand works in the real world. A company sets the price of its product at $10.00. No one wants the product, so the price is lowered to $9.00. Demand for the product increases at the new lower price point and the company begins to make money and a profit.

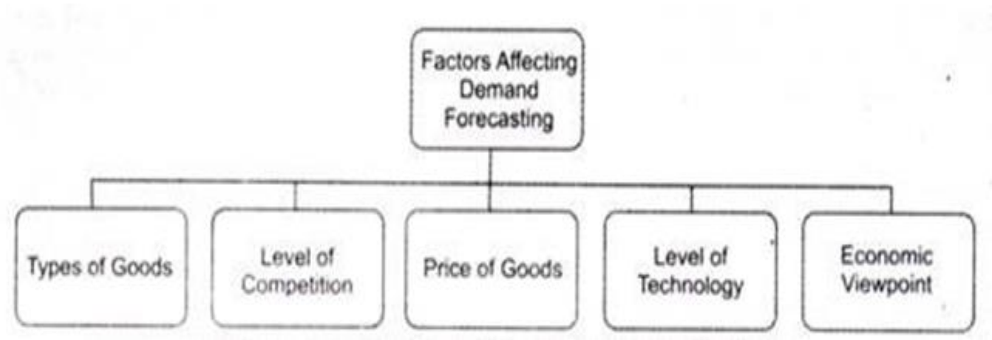
Supply and demand facts for

- The four basic laws of supply and demand are: If demand increases and supply remains unchanged, then it leads to higher equilibrium price and quantity.
- If demand decreases and supply remains unchanged, then it leads to lower equilibrium price and quantity.
- If the demand increases, and the supply remains the same, there will be a shortage. ...
- If the demand decreases, and the supply remains the same, there will be a surplus. ...

- If the supply increases, and the demand remains the same, there will be a surplus, and the price will go down.

FACTORS INFLUENCING DEMAND

Demand forecasting is a proactive process that helps in determining what products are needed where, when, and in what quantities. There are a number of factors that affect demand forecasting.



ELASTICITY OF DEMAND

An elastic demand is one in which the change in quantity demanded due to a change in price is large. ... In other words, quantity changes faster than price. If the value is less than 1, demand is inelastic. In other words, quantity changes slower than price. If the number is equal to 1, elasticity of demand is unitary.

Price elasticity of demand is an economic measure of the change in the quantity demanded or purchased of a product in relation to its price change. Expressed mathematically, it is: Price Elasticity of Demand = % Change in Quantity Demanded / % Change in Price.

DEMAND FORECASTING

- Demand Forecasting is the process in which historical sales data is used to develop an estimate of an expected forecast of customer demand.

- To businesses, Demand Forecasting provides an estimate of the amount of goods and services that its customers will purchase in the foreseeable future.

COMPETITION

- Competition determines market price because the more that toy is in demand (which is the competition among the buyers), the higher price the consumer will pay and the more money a producer stands to make. Greater competition among sellers results in a lower product market price.

- Competition can constrain buyers and sellers to be price-takers. The interaction of supply and demand determines a market equilibrium in which both buyers and sellers are price-takers, called a competitive equilibrium.

- Prices and quantities in competitive equilibrium change in response to supply and demand shocks.

- **The demand for a product will be influenced by several factors:**

  - Price. Usually viewed as the most important factor that affects demand. ...

  - Income levels. ...

  - Consumer tastes and preferences. ...

  - Competition. ...

  - Fashions

Unit – 5

Actual cost and opportunity cost – Marginal cost – Incremental cost and sunk cost, Fixed and
variable cost – Short-run long-run cost – Cost output relationship – Price fixation – Pricing
policies – Pricing methods. Break even analysis.

COST

- In business and accounting, cost is the monetary value that has been spent by a company in order to produce something. This is the amount charged for a product by the seller, and it includes both the cost to make the product and the mark-up cost added by the seller to produce a profit.
- In accounting, cost is defined as the cash amount (or the cash equivalent) given up for an asset. For example, the cost of an item in inventory also includes the item's freight-in cost. ... The cost of land includes all costs to get the land ready for its use.
- Cost, in common usage, the monetary value of goods and services that producers and consumers purchase. In a basic economic sense, cost is the measure of the alternative opportunities foregone in the choice of one good or activity over others.
- Costs are the amounts that a business incurs in order to make goods and/or provide services. Costs are important to business because they: Are the thing that drains away the profits made by a business. ... Is the main cause of cash flow problems in business. Change as the output or activity of a business changes.
- In accounting, **Actual Cost** refers to the amount of money that was paid to acquire a product or asset. This could be the historical, past, or present-day **cost** of the product. ... A customer might not be aware of the **actual cost** until the **expenses** are incurred during the repairs.
- Direct costs are related to producing a good or service. A direct cost includes raw materials, labor, and expense or distribution costs associated with producing a product. The cost can easily be traced to a product, department, or project. For example, Ford Motor Company (F) manufactures

cars and trucks. A plant worker spends eight hours building a car. The direct costs associated with the car are the wages paid to the worker and the cost of the parts used to build the car.

- Indirect costs, on the other hand, are expenses unrelated to producing a good or service. An indirect cost cannot be easily traced to a product, department, activity, or project. For example, with Ford, the direct costs associated with each vehicle include tires and steel. However, the electricity used to power the plant is considered an indirect cost because the electricity is used for all the products made in the plant. No one product can be traced back to the electric bill
- Fixed costs do not vary with the number of goods or services a company produces over the short term. For example, suppose a company leases a machine for production for two years. The company has to pay $2,000 per month to cover the cost of the lease, no matter how many products that machine is used to make. The lease payment is considered a fixed cost as it remains unchanged.
- Variable costs fluctuate as the level of production output changes, contrary to a fixed cost. This type of cost varies depending on the number of products a company produces. A variable cost increases as the production volume increases, and it falls as the production volume decreases. For example, a toy manufacturer must package its toys before shipping products out to stores. This is considered a type of variable cost because, as the manufacturer produces more toys, its packaging costs increase, however, if the toy manufacturer's production level is decreasing, the variable cost associated with the packaging decreases.
- Operating costs are expenses associated with day-to-day business activities but are not traced back to one product. Operating costs can be variable or fixed. Examples of operating costs, which are more commonly called operating expenses, include rent and utilities for a manufacturing plant. Operating costs are day-to-day expenses, but are classified separately from indirect costs – i.e., costs tied to actual production. Investors can calculate a company's operating expense ratio, which shows how efficient a company is in using its costs to generate sales.

- Opportunity cost is the benefits of an alternative given up when one decision is made over another. This cost is, therefore, most relevant for two mutually exclusive events. In investing, it's the difference in return between a chosen investment and one that is passed up. For companies, opportunity costs do not show up in the financial statements but are useful in planning by management.

For example, a company decides to buy a new piece of manufacturing equipment rather than lease it. The opportunity cost would be the difference between the cost of the cash outlay for the equipment and the improved productivity vs. how much money could have been saved in interest expense had the money been used to pay down debt.

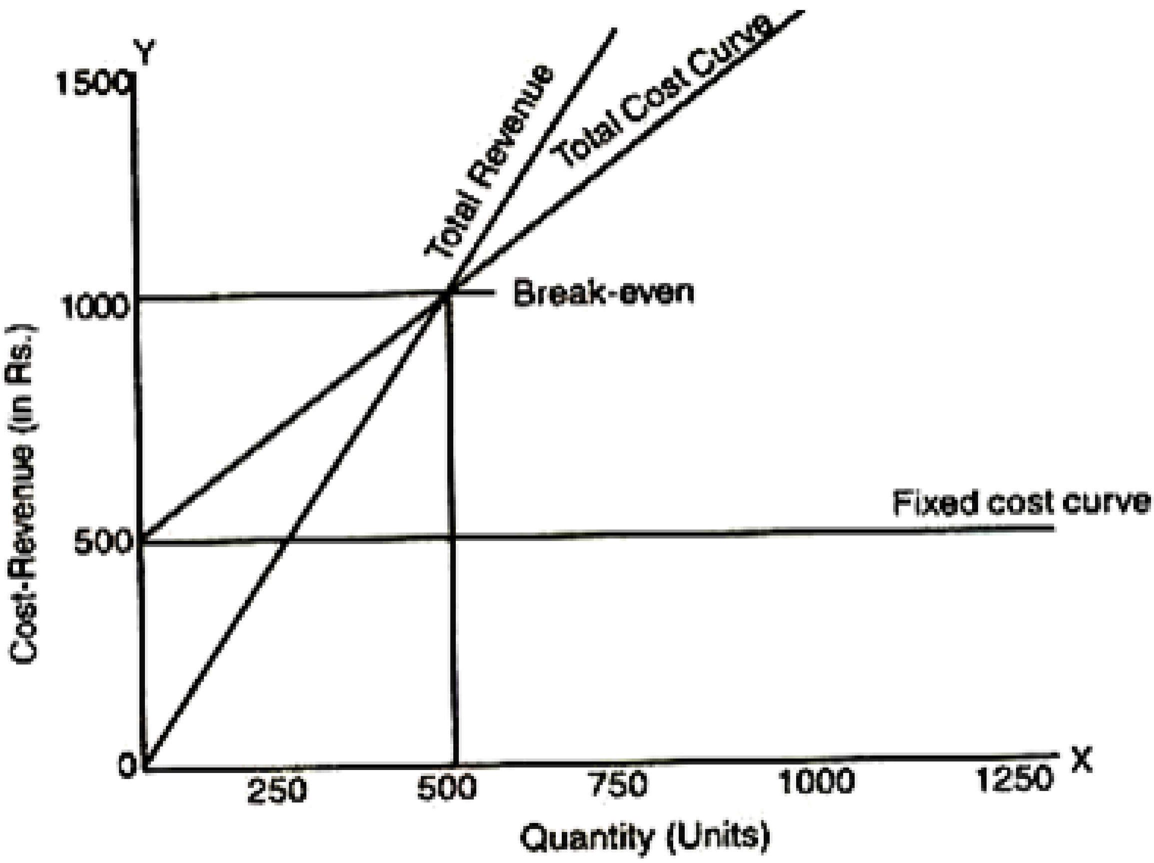
- Sunk costs are historical costs that have already been incurred and will not make any difference in the current decisions by management. Sunk costs are those costs that a company has committed to and are unavoidable or unrecoverable costs. Sunk costs are excluded from future business decisions.
- Controllable costs are expenses managers have control over and have the power to increase or decrease. Controllable costs are considered so when the decision of taking on the cost is made by one individual. Common examples of controllable costs are office supplies, advertising expenses, employee bonuses, and charitable donations. Controllable costs are categorized as short-term costs as they can be adjusted quickly.

Price Fixation

- **Price fixing** is an agreement between participants on the same side in a market to buy or sell a product, service, or commodity only at a fixed price, or maintain the market conditions such that the price is maintained at a given level by controlling supply and demand.
- The intent of price fixing may be to push the price of a product as high as possible, generally leading to profits for all sellers but may also have the goal to fix, peg, discount, or stabilize prices. The defining characteristic of price fixing is any agreement regarding price, whether expressed or implied.

BREAK-EVEN ANALYSIS:

Breakeven analysis is an important tool of profit planning in the hands of management. It is usually desirable to have a low break-even point; the less chances are of operating the business at a profit over the years. For example, in managing a hotel, a comfortable position can be had if the break-even point is at 60 per cent of capacity if it is at 90 per cent of capacity. Further, if an undertaking is operated close to the break-even point, slight changes in business environments are likely to result in losses.



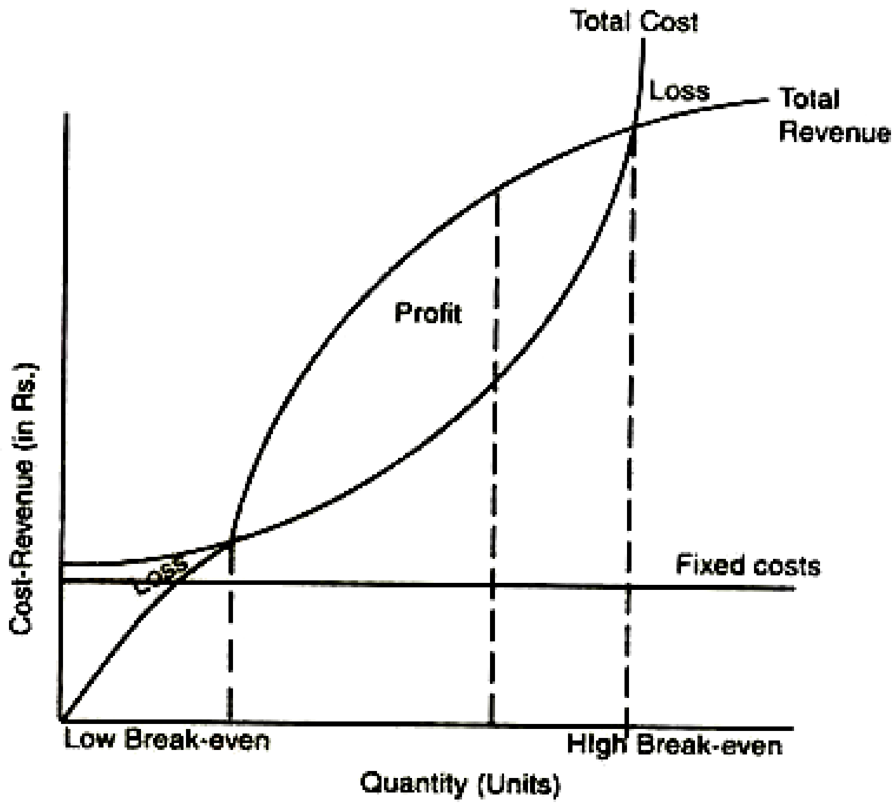
Profit performance of a business can be improved by increasing volume, by increasing selling price, by decreasing variable costs and by decreasing fixed costs. Taking some of the interrelationships of these four possibilities into consideration, one of the feasible thing can be selected.

Margin of safety:

This is the amount or ratio by which the current volume exceeds the break-even volume. Taking the above example, the current volume was assumed at 750 units. The margin of safety in this illustrative situation is 250 units or 50 per cent in relation to this break-even volume of 500 units, in other words, sales volume can decrease by one-third or 33.3 per cent before a loss is incurred, other factors remaining equal.

Non-linear break-even analysis:

In break-even analysis, linear (straight line) relationships are generally assumed. Introducing non-linear relationships through complicates matter slightly, yet it is easy to extend the analysis in this manner. For example, it is reasonable to think that increased sales can be obtained only if sales prices are reduced.



Further, empirical studies suggest that the average variable cost per unit falls over some range of output and then begins to rise. These assumptions are illustrated in the following figure. There we see a loss region when sales are low, then another loss region at very high output levels.

Merits of Breakeven analysis.

- Measure profit and losses at different levels of production and sales.
- Predict the effect of changes in sales prices.
- Analyze the relationship between fixed and variable costs.
- Predict the effect of cost and efficiency changes on profitability.

Demerits of Breakeven Analysis.

- Assumes that sales prices are constant at all levels of output.
- Assumes production and sales are the same.
- Break even charts may be time consuming to prepare.
- It can only apply to a single product or single mix of products.