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PAPER ONE (For all subject codes)
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MBA (Finance), JRF in Management, Commerce, HRM & Labour Welfare and Political Science

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OPERATIONS MANAGEMENT & RESEARCH

- **Operation Management**

The field of management that deals with the supervision, planning and redesigning business operations in the manufacture of services as well as goods is called as Operations Management.

Operations Management is about the administration and planning of the business operations in the production as well as the service of goods.

Operations Management refers to the ongoing management of daily works of a company, such as technical support, network management, etc. With Operations Management, there is no set end point.

Operations Management concern with the conversion of inputs into outputs, using physical resources, so as to provide the desired utilities to the customer while meeting the other organizational objectives of effectiveness, efficiency and adoptability.

It distinguishes itself from other functions such as personnel, marketing, finance, etc. by its primary concern for 'conversion by using physical resources'.

Types of Layout

Process Layout: Process Layout is best suited for non-standardized products; where there is a low volume, high variety manufacturing environment; where the market requires frequent change in product design. Similar machines or similar operations are located at one place as per the functions

Product Layout: A product layout is also called a line layout. In this type of arrangement, the various facilities, such as machine, equipment, work force, etc., are located based on the sequence of operation on parts. Facilities are located based on the sequence of operation on parts.

Group Layout: Combination of both process and product layout and incorporates the strong points of both of these.

Mixed Layout: Produces several items belonging to the same family.

Fixed Position Layout is essential when the products are difficult to move. Need for such type of layouts arises in case of extremely large and heavy products.

- **Quality Management**

Quality, as it is said, is not by chance but by intention.

Quality management is the act of overseeing different activities and tasks within an organization to ensure that products and services offered, as well as the means used to achieve them, are consistent. It helps to achieve and maintain a desired level of quality within the organization. Preventing change (control) and creating change (breakthrough) are two important functions of quality management. Unfortunately

Quality management consists of four key **components**, which include:

1. **Quality Planning** – The process of identifying the quality standards relevant to the project and deciding how to meet them.

2. **Quality Improvement** – The purposeful change of a process to improve the confidence or reliability of the outcome.

Quality Control – The continuing effort to uphold a process' integrity and reliability in achieving an outcome. Quality Control implies working to a set standard of quality which is achievable and which has a ready market. Thus Quality Control means adherence to a standard or prevention of a change from the set standard.

3. **Quality Assurance** – The systematic or the planned actions necessary to offer sufficient reliability that a particular service or product will meet the specified requirements.

The aim of quality management is to ensure that all the organization's stakeholders work together to improve the company's processes, products, services, and culture to achieve the long-term success that stems from customer satisfaction.

The process of quality management involves a collection of guidelines that are developed by a team to ensure that the products and services that they produce are of the right standards or fit for purpose.

- ✓ The process starts when the organization sets quality targets to be met and which are agreed upon with the customer.
- ✓ The organization then defines how the targets will be measured. It then takes the actions that are required to measure the quality.
- ✓ They then identify any quality issue that arises and initiates improvements.
- ✓ The final step involves reporting the overall level of the quality achieved.

The process ensures that the products and services produced by the team match the customers' expectations.

The quality improvement methods comprise three components: product improvement, process improvement, and people-based improvement. There are numerous methods of quality management and techniques that can be utilized. They include Kaizen, Zero Defect Programs, Six Sigma, Quality Circle, Taguchi Methods, the Toyota Production System, Kansei Engineering, TRIZ, BPR, OQRM, ISO, and Top Down & Bottom Up approaches among others.

- **KAIZEN**

- ✓ Kaizen" refers to a Japanese word which means "improvement" or "change for the better".
- ✓ **Kaizen is defined as a continuous effort by each and every employee (from the CEO to field staff) to ensure improvement of all processes and systems of a particular organization**.
- ✓ It is a management philosophy and forms the basis of the Toyota Production System (TPS) as well as Lean Manufacturing.

- ✓ The process of Kaizen helps Japanese companies to outshine all other competitors by adhering to certain set policies and rules to eliminate defects and ensure long term superior quality and eventually customer satisfaction.
- ✓ Kaizen works on the following basic principle. “Change is for good”.
- ✓ **Kaizen means “continuous improvement of processes and functions of an organization through change”**.
- ✓ In a layman’s language, Kaizen brings continuous small improvements in the overall processes and eventually aims towards organization’s success.
- ✓ Japanese feel that many small continuous changes in the systems and policies bring effective results than few major changes.
- ✓ **Kaizen process aims at continuous improvement of processes not only in manufacturing sector but all other departments as well**.
- ✓ Kaizen is gradual while innovation is viewed as being more radical.
- ✓ Implementing Kaizen tools is not the responsibility of a single individual but involves every member who is directly associated with the organization.
- ✓ Every individual, irrespective of his/her designation or level in the hierarchy needs to contribute by incorporating small improvements and changes in the system.

<u>There are three superordinate principles which form the bedrock of the Kaizen philosophy.</u>
These principles are:

1. ***Process creates results:*** Without improving the process results do not improve. Look to the improvement of one or more of the five inputs to the process-persons, machines, methods, materials, and environment.

2. ***Total systems are more important than each of the parts:*** Look for optimum vs sub-optimum-a paisa saved in one department has no merit if it adds a rupee of cost in another department.

3. ***Be non-blaming and non-judgmental:*** Determine what is wrong not who is wrong. Find the cause of the problem and correct it but do not kill the messenger.

<u>Elements of Six Sigma:</u>

- ✓ Teamwork
- ✓ Personal Discipline
- ✓ Improved Morale
- ✓ Quality Circles
- ✓ Suggestions for Improvement

<u>**Five S of Kaizen**</u>

"Five S" of Kaizen is a systematic approach which leads to foolproof systems, standard policies, rules and regulations to give rise to a healthy work culture at the organization.

You would hardly find an individual representing a Japanese company unhappy or dissatisfied. Japanese employees never speak ill about their organization.

The process of Kaizen plays an important role in employee satisfaction and customer satisfaction through small continuous changes and eliminating defects.
Kaizen tools give rise to a well organized workplace which results in better productivity and yield better results. It also leads to employees who strongly feel attached towards the organization.

Japanese Term	English Equivalent	Meaning in Japanese Context
Seiri	Sort	Throw away all rubbish and unrelated materials in the workplace
Seiton	Straighten	Set everything in proper place for quick retrieval and storage
Seiso	Scrub	Clean the workplace; everyone should be a janitor
Seiketsu	Standardize	Standardize the way of maintaining cleanliness
Shitsuke	Sustain/Self discipline	Practice 'Five S' daily - make it a way of life; this also means 'commitment'

1. **SEIRI -** SEIRI stands for Sort Out. According to Seiri, employees should sort out and organize things well. Label the items as "Necessary", "Critical", "Most Important", "Not needed now", "Useless and so on. Throw what all is useless. Keep aside what all is not needed at the moment. Items which are critical and most important should be kept at a safe place.

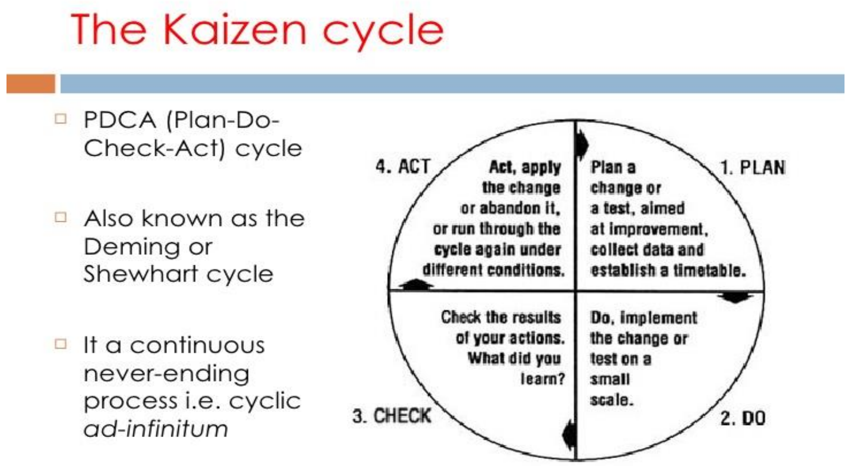
2. **SEITION -** Seition means to Organize. Research says that employees waste half of their precious time searching for items and important documents. Every item should have its own space and must be kept at its place only.

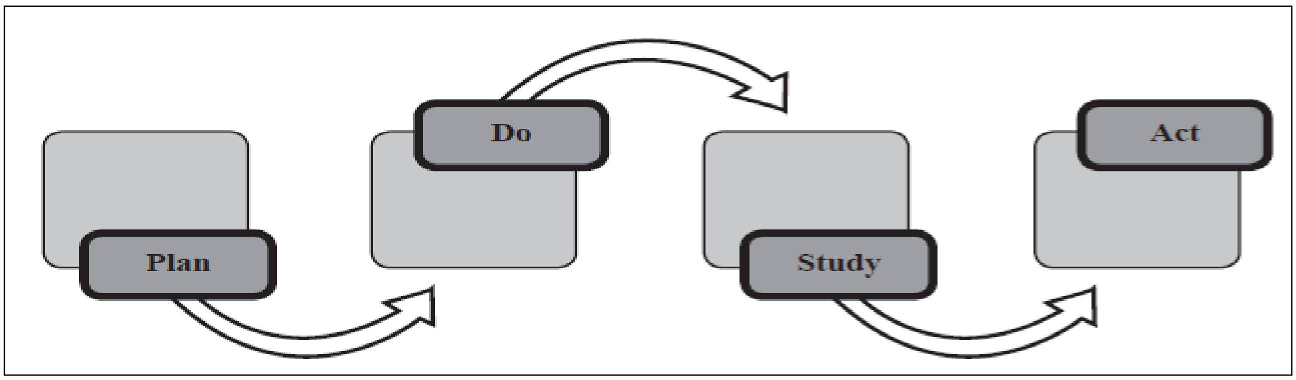
3. **SEISO -** The word "SEISO" means shine the workplace. The workplace ought to be kept clean. De-clutter your workstation. Necessary documents should be kept in proper folders and files. Use cabinets and drawers to store your items.

4. **SEIKETSU-SEIKETSU** refers to Standardization. Every organization needs to have certain standard rules and set policies to ensure superior quality.

5. **SHITSUKE or Self Discipline -** Employees need to respect organization's policies and adhere to rules and regulations. Self discipline is essential. Do not attend office in casuals. Follow work procedures and do not forget to carry your identity cards to work. It gives you a sense of pride and respect for the organization.

Note: *Kaizen focuses on continuous small improvements and thus gives immediate results.*





The term **'Operations Research'** was first coined by U.S. scientists McCloskey and Trefethen in the year 1940.

Operations Research is the application of scientific methods, techniques and tools to problems involving operations of a system so as to provide those in control of the system with optimum solutions to the problem. ------*Acoff, Annoff & Churchmann*

Operations Research is a scientific approach to problem solving for executive management. -----*H.M.Wagner*

Operations Research is a systematic study of a problem involving gathering data, building a mathematical model, experimenting with the model, predicting future operations and getting the support of management for the use of the model.

Operations Research is a problem solving and decision making science. It is concerned with scientifically deciding how best to design and operate man-machine systems, usually under conditions requiring the allocation of scarce resources.

Operations Research tries to optimize the total output by maximizing the profit/gains and minimizing the loss or cost. The primary focus is on decision making and computers are used extensively.

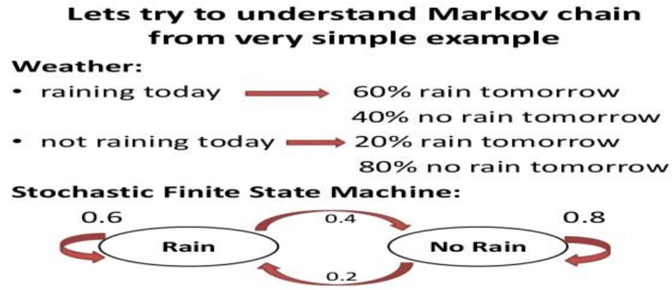
Note: Operations Research (OR) is not decision making. Rather, OR complements such human aspects of decision making as intuition, insight and judgement which will hopefully improve decisions made by the management in rational, logical, systematic and scientific way. OR is an inter-disciplinary team approach.

Model: The first step in solving an optimization problem using OR technique is to convert the problem into a model (mathematical model). A mathematical model is an abstraction (approximation) of a real life problem in mathematical terms.

Types of O.R. Models

1. *Allocation (Linear Programming)*	Linear Programming is the method of choosing the best (optimal) alternative amongst the available (feasible) alternatives for either profit maximization or cost minimization, when the objective function and the constraints are mathematically expressed Applications: Product-Mix, Scheduling, Routing, Facility Planning etc.
2. *Assignment*	It involves the assignment of a number of jobs to the same number of men (resources). This is called an assignment problem. This is a variant of Transportation Model which provides the basis for optimal allocation of tasks to facilities at minimum cost or time Applications: Allocating People, Jobs, Machines etc. *Transportation:* Distribution models help to determine the efficient transportation routes for moving the goods from factory / plants to different warehouses Applications: Transport / Logistics Industry (Distribution / Warehousing)
3. *Decision*	It is related to decision making under conditions of certainty, risk and uncertainty. The decision models are extremely useful in determining the degree of uncertainty and the extent to which it may be reduced. Applications: Water pollution, medicine, law, product decisions, advertising expenditures, etc
4. *Inventory control*	It helps managers to decide reordering time, reordering level and optimal ordering quantity. It gives rational answer to questions like when to buy, how much to keep in store, etc.
5. *Queuing (Waiting Line)*	The technique strikes an optimum balance between the costs of waiting against service-provided. It is the study of arrival of the customers for service, rate of providing service to customers and

	time spent by the customer in the line. <u>Applications:</u> Waiting Lines (queue) formed anywhere i.e air traffic scheduling, hospital operations, servicing machines, etc
6. Replacement	Whenever new equipment offers better service-conditions than the existing one; replacement theory comes into picture. This theory concerns the forecasting of replacement costs and deciding the optimum replacement policy <u>Applications:</u> Purchasing decision about existing similar equipment
7. Sequencing	Sequencing models provide basis for the choice as to the 'order in which multiple tasks can be performed' in minimum duration <u>Applications:</u> Aircraft Landings, Machining, Banking etc (Loading and Scheduling)
8. Network Scheduling	It is used to plan, schedule and monitor large projects. <u>PERT/CPM</u> *Programme Evaluation and Review Technique (PERT)* is used when activities time is not known precisely—only probabilistic estimate of time is available. *Critical Path Method (CPM)* is used when time taken by activities in the project are known with certainty Network Scheduling involves listing the activities in a project, setting relationship, determining sequence and drawing schedule of these activities in order to minimize the overall time and cost of the project <u>Applications:</u> Project Management, Scheduling (Infrastructure / Construction industry)
9. Simulation	Simulation provides solution to the problems which are too expensive for experimental analysis and too complicated for mathematical treatment. To simulate means to imitate and experiment on the model of real-life phenomenon. <u>Applications:</u> Inventory control, Queuing problems, Investment, Demand-Supply etc.
10. Competitive (Game theory)	Games theory is concerned with Decision-Making in the conditions wherein multiple opponents are competing with conflicting interests towards winning. i.e. It deals with maximizing WINS or minimizing LOSSES before commencing of action. <u>Applications:</u> Advertising / Sales Promotion / Branding etc
11. Markov-chain	It is defined by set of states in which some states emit (produce) symbols and other states are silent. It is a set of transitions with

	associated probabilities. The transitions derived from a given state define a distribution over the possible next states. (The probability of occurrence depends upon the immediately preceding i.e previous event.) Applications: Consumer buying patterns, to forecast debts, for planning personnel needs, etc 
12.Dynamic programming	It deals with relatively large and complex problems and involves sequencing of related decisions. It is a mathematical optimizing technique applied to multistage decision-making processes. It involves breaking a large problem into smaller ones' and finding the solution by working backwards from end of the problem to the beginning. Applications: Cargo loading, Bidding, EOQ, Traveling Salesmen Problem, product standardization..

❖ Queuing DecisionTheory

The study of waiting lines called 'queuing theory' is one of the oldest and most widely used OR techniques. The first recognized effort to analyze queues was made by a Danish Engineer, A.K. Erlang.

Queue refers to a line of waiting people or objects.

Eg: Booking counters, petrol pumps, untyped letters with a typist, vehicles waiting before a traffic signal lamp, etc.

Queue Formation: When the rate (or speed) at which customers are serviced at the service counters is less than the rate at which customers arrive at the counters, a queue gets formed.

Costs associated with Queues

There are two costs associated with queue are:

1. Cost of service facilities
2. Cost of waiting

Queuing theory is aimed at offering a solution to waiting line problems by striking a balance between the cost of service facilities and the cost of waiting and arriving at an optimum cost through an optimum balance between the two costs.

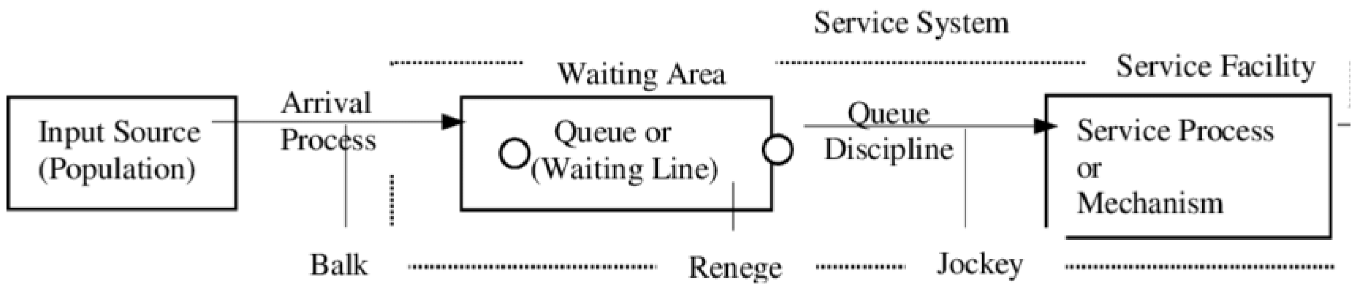
Costs associated with queuing system = (Cost of service facilities) + (Cost of waiting)

Cost of service facilities is a tangible cost. It comprises of cost of equipments, labour, material, etc. As the number of service facilities is increased, this cost will rise.

Cost of waiting is an intangible cost. It comprises of factors like physical discomfort caused to the customers in the queue, adverse opinion created about the organization, adverse emotional reactions of the customers, cost of lost business, etc. When there is lengthy queue, customers might leave without waiting for service.

The optimum balance between the two costs (which gives the minimum total cost) can be arrived at by adding additional service facilities at extra cost, altering the pattern of servicing, replacing the existence service facilities with more efficient service facilities, modifying/rescheduling the pattern of arrival of customers, reducing the service time through appropriate service methods, etc.

- **Elements of a Queuing System**



1. Input (or arrival) process:
'Size' of the input refers to the total number of customers that arrive for availing the service from time to time.

'The arrival pattern of input' refers to the rate at which customers arrive at the service system. The arrival pattern of the customers may be either at random or at a constant rate. The arrival may be single or bulk.
Mostly, the arrival is at random. When arrival rate is random, it may follow some probability distribution.
Note: Poisson distribution, name after French mathematician Simeon Denis Poisson, is a discrete probability.

2. Queue (or waiting line): Generally it is referred as length of the queue or line length. Queue size may be finite or infinite (i.e., a very large queue). Queue size along with the server(s) form the capacity of the system. A queue gets formed when the demand for service exceeds the capacity to provide that service. Sometimes, queues are also formed even when the service rate is higher than the arrival rate (demand rate). This happens due to random pattern of arrival of customers.

3. Service/Queue discipline: It refers to the rule according to which the next customer in the queue is selected for rendering service.

Queue/Service discipline types:

- FIFO - First In First Out Eg: Booking windows, bank counters, etc (FIFO is the most commonly used service discipline)
- LIFO - Last In First Out. LIFO is also called as FILO First In Last Out. Eg: Letters on on executive's desk, goods in godown, Stack, etc
- SIRO - Service in Random Order. Eg: Selling tickets in a bus
- SIP – Service in Priority. Eg: Emergency cases in hospitals

Also there is priority service which is two types.

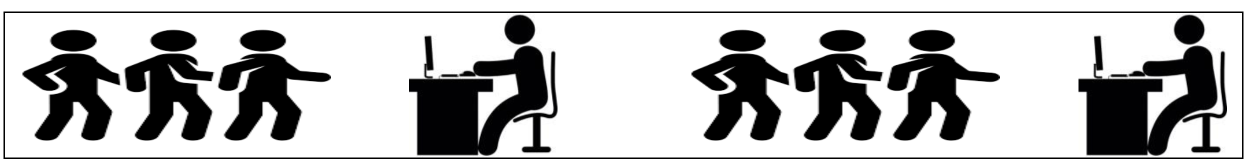
✓ *Pre-emptive*: The customers of high priority are given service over the low priority customer.

✓ *Non-preemptive:* A customer of low priority is served before a high priority customer.

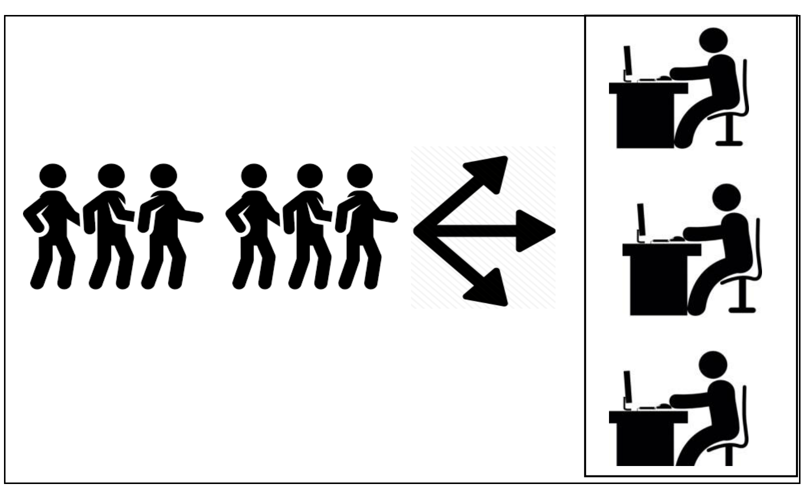
4. Service mechanism/arrangement: It refers to the arrangement of service facility to serve the customers. It can have one or more service facility.

a) Single queue, single server: There is only one queue and there is only one server.

b) Single queue, multiple servers in series: There is only one queue and the customers are served at two or more servers that are arranged in series.



c) Single queue, multiple servers in parallel: There is only one queue, but there is more number of servers at the end of the queue.



a) **Multiple queues, multiple servers:** There is more than one queue and every queue has one or more servers. On arrival a customer can choose anyone of the queues.

5. Customer behaviour: In a queuing system some common types of human behaviours are observed.

- ***Jockeying:*** When there are more than one queue, a customer may keep on *switching from one queue to another* i.e If one queue is shorter than one join from a larger queue to it.

- ***Balking:*** This refers to a new customer *refusing to enter the system* i.e If the length of the queue is large, one decides not to enter into it.

- ***Reneging:*** This refers to the situation where a customer *leaves the queue without getting service* after having waited in the queue for some time. When a person becomes tired i.e . loses patience on standing on a queue, the person leaves the queue.

- ***Collusion:*** This refers to the situation where a customer *demands service on their behalf* and also on behalf of others.

6. System output: It refers to the rate at which customers leave the queue system after receiving service.

✓ In Single queue, single server arrangement; the system output will be equal to the service rate.

✓ In Single queue, multiple servers in series arrangement, the system output will be equal to the minimum of the service rates of the service facilities.

✓ In Single queue, multiple servers in parallel arrangement, the system output will be equal to the sum of the service rates of the service facilities that are in parallel.

✓ In Multiple queues, with single server in each queue arrangement, the system output will be equal to the sum of the service rates of the servers.

✓ In Multiple queues, with multiple servers in each queue arrangement, the system output will be equal to the sum of the service rates of the servers in each queue.

❖ Decision Theory

The choice making is technically termed as decision making or decision taking.

A decision is simply a selection from two or more courses of action.

A decision can be defined as a course of action taken consciously and after careful study from the available alternatives, with the purpose of achieving the desired objectives.

The managerial activity includes planning, organization, direction, supervision and control. Decision making permeates (filters) all management activities.

Stages in decision making process

1. Defining the objective
2. Gathering all the required information
3. Identifying the alternative courses of actions available.
4. Studying the alternatives and identifying the best course of action that supports the objective.

Steps in Decision Theory

1. Clearly identify and define the problem at hand
2. Specify objectives and decision criteria
3. Identify and evaluate the possible alternatives
4. Formulate or select one of the mathematical decision theory models
5. Apply the model and select the best alternative
6. Conduct a sensitivity analysis of the solution
7. Communication and implementation of decision
8. Follow-up and feedback of results of decision

Concepts

The decision maker refers to individual or a group of individuals responsible for making the choice of an appropriate course of action amongst the available courses of action.

Courses of action/Strategies are the acts that are available to decision maker.

States of nature/Outcomes are nothing but different events. The decision maker has no control over which event take place and can only attach a subjective probability or degree of belief of occurrence of each. Eg: level of market demand for a particular item during a stipulated time period.

Payoff measures the net benefit of the decision maker that accrues from a given combination of decision alternatives and events. They are also known as conditional profit values or conditional economic consequences.

Payoff table lists the states of nature (outcome or events) which are mutually exclusive as well as collectively exhaustive and a set of given courses of action (strategies).

Regret or opportunity loss is the amount of payoff (or profit) that is lost by not selecting the course of action that offers the greatest payoff for a given state of nature. It is the difference between the payoff for the decision made and the payoff that the decision maker would have received if he had made the best decision.

Types of decision making environments

Outcome State	*Explanation*
1.Certainty	Complete and accurate knowledge of the outcome of each alternative. There is only one outcome for each alternative.
2. Risk	Multiple possible outcomes of each alternative can be defined; a probability of occurrence can be attached to each.
3. Uncertainty	Multiple outcomes for each alternative can be identified, but there is no knowledge of the probability to be attached to each.

I. Decision making under Certainty (Deterministic Models)

This is a situation when the consequences of the different alternatives can be predicted with certainty. Since the expected results (or consequences) of the possible courses of actions are known, the decision maker will choose an alternative that offers him the maximum benefit.

The various techniques used for solving problems under certainty are: Linear programming, Queuing models, Inventory models, Capital budgeting and Break-even analysis, etc

Examples:

- ✓ Determination of Economic Ordering Quantity (EOQ) in managing inventory,
- ✓ Identification of critical path in a project network,
- ✓ Determination of break- even point that leads to a no-profit no-loss situation, etc

II. Decision making under Risk (Stochastic Models)

In this situation, the decision maker faces several states of nature and knows the probability distribution of the states of nature. The best decision is to elect that course of action which has the largest expected payoff value.

Arriving at a decision on the basis of Expected Monetary Value (EMV) or on the basis of Expected Opportunity Loss (EOL) are some of the techniques that fall under the category of making decisions under risk.

III. Decision making under Uncertainty

Under this condition, the probabilities associated with occurrence of different states of nature are not known as there is no historical data available. Such situations arise when the problem is totally new eg: introduction of a new product in the market or setting up a new plant. Still, decisions are to be taken.

The numbers of different decision criteria available under the condition of uncertainty are given below:

a) The criterion of Pessimism (Maximin)
b) The criterion of Optimism (Maximax)
c) Minimax Regret Criterion
d) Criterion of Realism (Hurwicz Criterion)
e) Criterion of Rationality (Baye's or Laplace Criterion)

Pessimistic Criteria (assumes that the worst is going to happen)	***1. Maximin i.e Waldian criterion*** *(By Abraham Wald)*	The decision maker locates the minimum possible payoff from each course of action. He then selects that decision which leads to maximum payoff from within this group of minimum possible payoffs. Here, payoff refers to the profits or gains to be obtained. Determine the minimum assured payoff from each alternative Choose the alternative that corresponds to the maximum of the minimum payoffs (gains/profits)
	2. Minimax criterion *(By Leonard Savage)*	The payoff refers to the loss (or cost) to be incurred. Determine the maximum loss for each alternative. Select the alternative that corresponds to the minimum of the maximum costs (losses)
Optimistic Criteria (assumes that the best is going to happen)	***1. Maximax criterion*** *(By Leonid Hurwitz)*	The payoff here refers to the profits or gains. This criterion chooses a strategy that maximizes the maximum gains from each alternative.
	2. Minimin criterion	The payoff here refers to the costs or losses. This criterion chooses a strategy that minimizes the minimum losses from each alternative.
Realism Criteria	***Weighted Average criterion*** *(By Hurwicz)*	A rational decision maker will have both optimism and pessimism. The value of 'α' lies between 0 &1. A value of '0' indicates complete pessimistic attitude. A value of '1' indicates a complete optimistic attitude about the future. α=Co-efficient of Optimism 1-α= Co-efficient of Pessimism According to Hurwicz, select a strategy which maximizes: H= α (Maximum payoff in column) + (1- α) (Minimum payoff in column
Rationality criteria	***Baye's or Laplace Criterion*** *(Developed by Thomas Bayes and supported by Simor de Laplace)*	This criterion assigns equal probabilities to all the events of each of the alternative decisions. i.e the probabilities of different states of nature are all equal

Decision tree analysis

Decision tree approach is a graphical technique that can be used for analyzing the pros and cons of alternative decisions and choosing the best possible course of action. In real life situation, business decisions are taken under conditions of uncertainty.

A decision tree is made up of nodes and branches.

Nodes are of two types: decision node (represented as a square) and chance node (represented as a circle).

The different alternatives available for the given situation emerge from the decision point. Chance node represents the result of a decision

❖ PERT/CPM

- ***PERT (Programme Evaluation and Review Technique)***

  PERT (Program Evaluation Review Technique) is an estimation technique which was first developed and applied by United States Defence establishment for their Ballistic Missile development program.

  PERT was developed by a Navy sponsored Research Team composed of Messrs D.G. Malcolm, J.R.Roseboom, C.E.Clark and W.Fazar in about 1950.

  This method of estimation which helped them build-in all the uncertainties in their estimates and helped them to complete this program ahead of their expected schedule.

  PERT is designed for scheduling complex projects that involve many inter-related tasks. It improves the planning process and used in controlling the project.

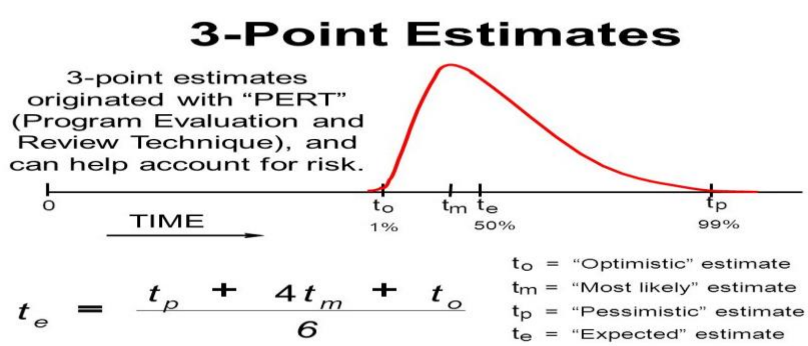
  PERT system of Three Time Estimates

  1. ***Optimistic time (a or t_o):*** Estimate when all favourable things will happen (all opportunities happen and no threats take place)

  2. ***Most likely time (m or t_m):*** Estimate when both favourable and unfavourable conditions will happen.

  3. ***Pessimistic time (b or t_p):*** Estimate when all unfavourable conditions happen (all threats happen and no opportunities take place)

Note: a is the best case estimate, m is the most likely estimate and b is the worst case estimate.



In 3-Point Estimation Expected Value of a task is determined by calculating Mean of 3 different values. These 3 different values are

1) Optimistic Value (O)
2) Pessimistic Value (P)
3) Most Likely Value (M)

- ***CPM (Critical Path Method)***

✓ The CPM was developed in the 1950s by DuPont, and was first used in missile-defense construction and technology projects.
✓ Critical Path Method is used to prepare the optimized project schedule involving all the project activities.
✓ CPM act as the basis both for preparation of a schedule, and of resource planning.
✓ Critical Path Analysis formally identifies tasks which must be completed on time for the whole project to be completed on time. It also identifies which tasks can be delayed if resources need to be reallocated to catch up on missed or overrunning tasks.
✓ *The critical path is the sequence of activities with the longest duration.*

Critical Path Method helps in:

1. Determining the minimum time in which the project can be completed
2. Determining the sequence of activities which must be completed on time in order to complete the project in time
3. Determining which all tasks can be delayed without delaying the project completion time
4. Determining the Early and Late Start of tasks
5. Tracking project progress with regards to agreed timeline and taking proactive corrective action if the project seems to be getting delayed

PERT ***(Programme Evaluation and Review Technique)***	***CPM*** ***(Critical Path Method)***
The US Navy's Fleet Ballistic Missile Program' whose approach was named 'Project Evaluation and Review Technique (PERT)	DuPont, an American chemical company who called their approach 'Critical Path Method' (CPM)
PERT was developed and is used in connection with R & D work. (unpredictable activities)	CPM was developed and is used in connection with construction projects. (predictable activities)
PERT is a technique of planning and control of time.	CPM is a method to control cost and time.
Estimate of time for activities are not so accurate and definite.	Durations of activity may be estimated with a fair degree of accuracy.
PERT is useful for non-repetitive and complex projects with uncertain time estimates.	CPM is useful for repetitive and non-complex projects with a certain degree of time estimates.

PERT works with probabilistic time (PERT is based on β distribution)	CPM works with fixed deterministic time.
PERT is restricted to time variable.	CPM includes time-cost trade off.
PERT considers three time estimates (Optimistic, Most likely and Pessimistic)	CPM timing is always fixed and known (one estimate)
PERT is event oriented (network), which does not required resources.	CPM is activity oriented (network), which required resources.
PERT is appropriate for High precision time estimate	CPM is appropriate for Reasonable time estimate
In PERT, it is assumed that cost varies directly with time. Attention is therefore given to minimize the time so that minimum cost results. Thus in PERT, time is the controlling factor.	In CPM, cost optimization is given prime importance. The time for the completion of the project depends upon cost optimization. The cost is not directly proportionate to time. Thus, cost is the controlling factor.

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BUSINESS ETHICS, CORPORATE GOVERNANCE & CSR

Ethics

There are three ideals of human life: truth, beauty and goodness. They correspond to three aspects of our experiences: thinking, feeling and willing. *The ideals of good refer to the ethics.*

Ethics is the subject of philosophy. It refers to the standards on which the person decides what is right or wrong or good or bad.

It prescribes what human being ought to do, usually in terms of rights, obligations, benefit to society, fairness or specific virtues.

The word 'ethics' known as 'ethikos' in Greek & 'ethicus' in Latin, is derived from 'ethos' which means character or manners.
Thus, ethics is the science of morals, moral principles and rules of conduct.

Ethics is "the study of what is right or good human conduct".

"Ethics is "the science of ideal involved in human life".

Ethics is "the science of moral judgement".

Ethics is "the science of morals in human conduct".

Ethics is "the study of the general nature of morals and of specific moral choices".

Ethics is a set of moral principles, which guides the code of conduct and behaviour of a human being in his life and in society. It is person's own attitude and concerning good behaviours.

"Ethics are a way of life. It is awareness that one is an intrinsic part of a social order, in which the interests of the others and one's own interests are inevitably intertwined".

----*Salmon & Hanson*

Ethics is not simply the laws of appropriate human conduct and relationships but are urge to do good and be good to others which ultimately fulfill it in laws. Ethics operate between law and morality.

Ethics refer to the process of reasoning which enables one to make better sense of "who is harmed and who is benefited by each alternative, whose rights are protected and whose violated".

Ethics refers to a system of moral principles- a sense of right and wrong and goodness and badness of actions and their motives and consequences.

Ethics is a normative science. It sets the norm explaining what ought to be the ideal human conduct and character. Hence, it is not a positive science. It is sometimes defined as the science of character.

Branches of Ethics	***Description***
1. Applied ethics	Tells us how a moral outcome can be achieved. It is concerned with the practical application of the doctrines of morality.
2. Normative ethics	Studies the determination of the correct moral standard or norm.
3. Descriptive ethics	Deals with the moral values that people in a society try to abide by.
4. Meta-ethics	Analyses the truth-value of ethics related propositions and practices.
5. Modern ethics	Concentrates on the deontological and consequential aspects of moral development and human behaviour.

Morality	**Ethics**
Prescribe right conduct for every one	Right code of behaviour for a group or profession
Absolute and not changeable	Subject to change and relative in nature
Individual disposition	Applied in the social system, groups or professions
Nomological in origin	Arises out of specific recommendations of conduct in a particular profession.
Handed over from generation to generation; primordial in origin	It is developed and goes on evolving.
It is prescriptive.	It is recommended to be followed in a profession.

Moral Standard	Meta-moral standard
It is based on some concepts of morality	It does not have to be so
It is primordial in origin. Not given by authorities, but steeped in religion and nomological axioms	It is not so. It is formulated by an agency or person.
It is idealized and normative	It is practical and pragmatic.
It is neutral, impartial and universal.	It is relative in character.
Needs some inclination to follow morality.	It is practice oriented.
It is superior to meta-moral standard.	Since, it is man-made, it is vulnerable and hence does not extract respect.
Has obligation to observe/obey the standard.	No such obligation
Coming from within and inward	Coming from outward
Is a type of individual disposition	It is based on accepted rules
Is non-observance hurts and injure your sentiment.	It does not give you any such sentiment.

Ethical Principles in Business

Ethical principles can be classified into two categories: teleological and deontological. The teleological theories determine the ethics of an act by looking at the consequences of the decision (the end), while deontological theories determine the ethics of an act by looking to the process of the decision (the means).

1. ***Teleological (Utilitarianism) Ethical System:*** The teleological morality of a decision is determined by measuring the probable outcome. The theory most representative of this approach is utilitarianism, which seeks the greatest 'good' (or utility) of the greatest number. The most basic form of utilitarian analysis is cost-benefit analysis, where one tallies the costs and benefits of a given decision and follows the decision that provides for the greatest overall gain. Utilitarianism holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness.

2. ***Deontological Ethical System:*** A deontological system is based on rules or principles that govern decisions. In this system, ethics are measured by the rightness of an act and depend little on the results of the act. According to this, a moral person is one of goodwill, and that person makes ethical decisions based on what is right, regardless of the consequences of his decision. Thus, the student who refuses to cheat during examinations is morally worthy if his or her decision springs from but sense of duty. But it is morally unworthy if the decision is merely one born of self-interest, such as fear of being caught.

3. ***Hybrid Theory:*** Robert Nozick holds that justice and fairness, right and wrong are measured not by equality of results for all, but from ensuring equal opportunity for all to engage in informed choices about their own welfare.

Enlightened ethical egoism holds that it is important to the individual that the world is a 'good' world; therefore the individual may have a self- interest in curbing pollution or participating in community projects, even though she or he may not individually and personally benefit from the decision.

4. ***Distributive Justice and Social Contract:*** Prof. Rawls of Harvard University propounded this theory. According to it, that when people get together, they form societies and engender cooperation, but when they come together conflict also arises because people do not receive a just distribution of the benefits yielded through their activities. Rawls believe that the base of all distribution systems should be just and the primacy of justice in the basic structure of our system of society necessitates greater equality.

5. ***Individual Freedom:*** According to this theory, all individuals must be allowed to make informed choices by society. Such choices must be within the law and the same freedom enjoyed by one individual in the society must be extended to all within the society.
Informed choices means everybody shares the information, and is allowed to make his or her own choice, but without transgressing the law of the state.

Justice

The term "justice" is derived from the word "just", which means "appropriate", "propoer" and "fair". The word "fairness" is regarded as the most appropriate equivalent to the term "justice".
Justice is a normative social order. It is a form of righteousness. When some people are in bondage, justice implies freedom to them.
Justice is action in accordance with the requirements of some law.
Absolute justice is divine and is difficult to achieve in the real world. In the actual practice, we come across what is known as relative justice.

Types of Justice

1. Procedural Justice

There may be justice in an act. However, what is important to see whether that action has been performed complying to the maw or through a correct procedure.
The principle of *fairness* is also found in the idea of *fair play* (as opposed to the *fair share* of distributive justice).
Implementing fair procedures is central to many dispute resolution procedures, including negotiation, mediation, arbitration, and adjudication.
If people believe that a fair process was used in deciding what it to be distributed, then they may well accept an imbalance in what they receive in comparison to others. If they see both procedural and distributive injustice, they will likely seek restorative and/or retributive justice.

1. Commutative Justice

Commutative justice is a form of justice where fairness or justice is ensured at the beginning and all people are treated equally. It also ensures that all people are given equal opportunities for development.

2. Compensatory Justice

In the case of compensatory justice, some compensation is given to the person who has been treated unequally in the past. The point is that the compensation for the injustice done in the past must be proportional or equivalent to the loss sustained by an individual in question.

3. Retributive Justice

This ensures some form of punishment to a defaulter. The imposition of fines or penalties, however, may not be adequate or just in a particular situation.

Retributive justice works on the principle of punishment, although what constitutes fair and proportional punishment is widely debated. While the intent may be to dissuade the perpetrator or others from future wrong-doing, the re-offending rate (recidivism) of many criminals indicates the limited success of this approach.

Punishment, in practice, is more about the satisfaction of victims and those who care about them. This strays into the realm of revenge, which often can be more severe than reparation as the hurt party seeks to make the other person suffer in return. In such cases, 'justice' is typically defined emotionally rather than with intent for fairness or prevention.

4. Communitarian Justice

This refers to a system of justice shown to a particular community which has been suffering in the past from injustice. Eg: Tribal people in many countries are not given equal freedom and rights like other citizens

5. Distributive Justice

The basic idea of distributive justice is to treat equal people equally and unequal people unequally. The principle of distributive justice upholds the view that the benefits and burdens in a society must be distributed equally among its members. In certain cases, like first-come-first-served, ladies first or the sick and disabled people may be given more preference that a normal person.

Distributive justice, also known as *economic justice*, is about *fairness* in what people receive, from goods to attention. Its roots are in social order and it is at the roots of socialism, where equality is a fundamental principle

Note: ("equality" means that everyone gets the same amount, regardless of their input. Distribution on the basis of need means that people who need more will get more, while people who need less will get less.)

6. Restorative justice. The first thing that the betrayed person may seek from the betrayer is some form of restitution, putting things back as they should be.

The simplest form of restitution is a straightforward apology. Restoration means putting things back as they were, so it may include some act of contrition to demonstrate one is truly sorry. This may include action and even extra payment to the offended party.
Restorative justice is also known as corrective justice.

Restoration means putting things back as they were, so it may include some act of contrition to demonstrate one is truly sorry. This may include action and even extra payment to the offended party. Restorative justice is also known as *corrective justice*.

Business Ethics

Business ethics is concerned primarily with the relationship of business goals and technology to specifically human ends. It studies the impact of act of good on individual, the firm, the business community and society as a whole.
Business ethics studies the special obligation which a person and a citizen accept when he or she becomes a part of the world of commerce.
Doing business ethically means holding right things right and wrong things wrong in business.

Any ideal ethical decision comprises of fellow virtues:	
1. Right	Morally correct
2. Equitable	Just and equal
3. Good	Highest good for all concerned
4. Proper	Appropriate and acceptable
5. Fair	Honesty
6. Just	Action

Business ethics is the normative science of conduct i.e its function is to judge the moral worth of conduct with reference to a norm ideal or standard.

Business ethics is the study of good and evil, right and wrong, just and unjust actions of businessmen.

Business ethics covers all aspects of business as there is no business conduct which is totally free from moral considerations.

Business ethics is the application of the principles of ethics in the realm of business, trade and commerce.

Business ethics is the evaluation of business in terms of certain ethical principles and norms.

Business ethics deals with certain moral principles that can tell us whether a particular business concern is run in a morally right or wrong way.

Business ethics is the sum-total of rules and principles which can be regarded as the standard norm to evaluate and guide business activities.

According to Crane, "Business ethics is the study of business situations, activities, and decisions where issues of right and wrong are addressed."

Baumhart defines, "The ethics of business is the ethics of responsibility. The business man must promise that he will not harm knowingly."

"Business Ethics is generally coming to know what is right or wrong in the work place and doing what is right. This is in regard to effects of products/services and in relationship with the stake holders."-----***Cater Mcnamara***

"Business ethics in short can be defined as the systematic study of ethical matters pertaining to the business, industry or related activities, institutions and beliefs. Business ethics is the systematic handling of values in business and industry." ----***John Donaldson***

Ethical Dilemma

An ethical dilemma is a situation that involves at least an ethical issue where a clear decision or a choice becomes problematic because of competing claims or interests. There may be an ethical contradiction or conflict in the choice to be made.

For eg: John is asked by the manager to mix water in milk and sell it to the customers. John being innocent and does not want to indulge in unethical work. John is in ethical dilemma now: his ethical principle does not allow him to mix water with milk, but if does not carry out the order of the manager, may lose his new job which he wants very badly.

For ethical dilemma, the solution is not unique or universal; it depends to a great extent on the ethical background and personality pattern of the decision-maker. If john has a weak moral background, he will obey the order of his manager and will retain his job.

Characteristic features of ethical dilemmas

- Social cost and private gains are different.
- No linkage is established between the two alternative courses of actions (choices)
- Competitive behaviour gains predominance in many cases.
- There may be an inconsistency between goals (materialism vs altruism) i.e self-sacrifice/unselfishnesss
- Cross-cultural value differentials do exist.
- There are some pressures from somewhere
- A problem of right choice is the main issue.
- Very often, the exact impact of the two alternatives may not be known or determined.

Types of ethical dilemmas

- Ethical dilemma between one ethically right and one ethically wrong alternative.
- Ethical dilemma between two ethically wrong alternatives.
- Ethical dilemma between two ethically right alternatives.

Note: The basic causes of ethical dilemmas are the clash of two situations where one may be right and the other may be wrong, both may be wrong, or both may be right.

Some major unethical business practices are:

- Sexual harassment at workplaces
- Forced labour and bonded labour
- Sweat shops (poor working conditions)
- Discrimination
- Fraud
- Theft
- Corruption

Krolick Model of decision-making styles

1. Individualistic mode: is based on self-interest, personal gain, progress and success.

2. Altruism mode: Altruism is a philosophical and a philanthropic approach. In this context, altruists think about the interests of the society, mankind and the future generation. They take or recommend the policy which will maximize happiness of all or at least the maximum number of people. Altruists do not make a rational calculation of costs and benefits from the project, this is how they are different from utilitrians.

3. Pragmatist mode: Pragmatists are concerned with the practical solution of a problem at the present moment by disregarding other things. The present needs, problems and solutions are more important to pragmatists than anything else.

4. Idealistic mode: Idealists are lovers of ideal principles or rules. Sometimes, they blindly follow those rules. Business decisions of idealists will be based upon an ethical principle which is dear to them and for that principle; idealists can sacrifice anything and everything. They are duty-bound people and justify their actions in terms of certain ethical norms or principles.

Ethical models for making business decisions

1. Consequence-based model (Utilitarianism or Consequentialist Principle)

This principle holds that a policy or action is ethically good or correct if such an action produces the greatest good for the largest number of people. Consequentialism puts more emphasis on the consequences or result of an action rather than the action itself.

2. Duty-based model (Universalism or Kantianism)

According to this principle, all persons should be treated with respect. It says that a person or a firm has certain universal duties to protect others whose welfare or needs are at risk. It is perfectly an ethical decision to help these individuals and provide them their legitimate basic needs.

The principle emphasizes that a duty-based action is ethically correct an idea propounded by Immanuel Kant.

3. Rights-based model

According to the theory of rights, it is ethically correct to take a decision or make a policy that will guarantee the legitimate rights to people who do not have these rights. The violation of rights must be protected and legitimate rights must be established or restored.

4. Justice-based model

Justice is an ethical action that treats everyone fairly and consistently in accordance with some legal or ethical standard

Justice also implies a policy or decision where all equals are treated equally.

Since all people are not equal in every respect, justice demands that equity should be the correct principle and not absolute equality. Thus, for a person in the middle-income group, the rate of tax is lower than that on a rich person.

The concept of justice includes:

- Distributive justice (fair distribution of benefits and burden)
- Procedural justice (fair method of making a deal, agreement or contract)
- Retributive justice (correct punishment in accordance with the harm or injury done)
- Compensatory justice (fair compensation to someone for the harm or injury done in the past)

5. Virtue-based model

Any decision or action is justified if it encourages certain virtues like honesty, integrity, sincerity, self-control, fairness, sacrifice, trust, trustfulness and so forth.

6. Common Good model

A business decision that contributes positively for the maximization of social welfare or benefits for all is an ethical decision because it enhance common good and all are benefitted.

7. Care-based model

Care-based ethics is perhaps the best of all ethical models. It says that the interlocking social and personal relationship is the basis of all ethical actions. A decision is ethical which is based on care, compassion and love.

Corporate Social Responsibility (CSR)

Business depends on society for existence, sustenance and encouragement. Dependence of business on society is so complete that as long as that latter (society) wants the former (business), business has reason to exist.

Social responsibility is understood as the obligation of decision-makers to take actions which protect and improve the welfare of society as a whole along with their own interests.

CSR is a gesture of showing the company's concern and commitment towards society's sustainability and development.

CSR is the responsibility of the corporate sector to contribute to some activities that increase social welfare.

CSR refers to the obligations of the businessmen to pursue those policies, to make those decisions or to follow those lines of actions which are desirable in terms of the objectives and value of our society.

CSR is the ethical behaviour of a company towards society.
CSR is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large.

CSR is understood as the obligation of decision-makers to take actions which protect and improve the welfare of society as a whole along with their own interests.

CSR is an ethical issue and therefore, is normative in character. CSR will be different for different types of business institutions and also for different levels of society. There is no straightjacket formula for CSR. In a sense, CSR is relative concept.

The **Companies Act, 2013** has formulated Section 135, **Companies (Corporate Social Responsibility) Rules, 2014** and Schedule VII which prescribes mandatory provisions for Companies to fulfil their CSR. This article aims to analyse these provisions (including all the amendments therein).

Applicability of CSR Provisions:

On every Company including its holding or subsidiary having:

- Net worth of Rs. 500 Crore or more, or
- Turnover of Rs. 1000 crore or more, or
- Net Profit of Rs. 5 crore or more during the immediately preceding financial year

A foreign company having its branch office or project office in India, which fulfills the criteria specified above

However, if a company ceases to meet the above criteria for 3 consecutive financial years then it is not required to comply with CSR Provisions till such time it meets the specified criteria.

CSR may be started as a proactive or a reactive situation. When CSR is the practice or the firms are compelled to do it, then there is a natural tendency to finance that by raising the prices or following many other unethical ways. This method of collecting money for CSR is often described as the **Reverse Robinhood Effect.** Thus, when a firm is taking CSR, it does not follow that it is basically ethical in all its approaches.

(The method of collecting money for CSR by raising prices or following many other unethical ways is often described as Reverse Robinhood effect)

Models of CSR

1. Friedman model

According to Milton Friedman, a businessman has no duty other than developing his business. If he looks after his business well, he is performing a social as well as a moral duty. So, a businessman has no other social responsibility to perform except to serve his shareholders and stockholders.

2. Ackerman model

The model has emphasized on the internal policy goals and their relation to the CSR. This model depicts four critical stages to arrive at the evaluation of the social performance audit stage. The four stages involved in CSR are briefly explained below:

I. Identification of the project that will be chosen for social delivery.

II. Intensive study of the problem by hiring experts and getting their suggestions to make it.

III. Make the project public and also implement it.

IV. Stage of Evaluation. In this stage, needs of the society are considered very minutely and problems and issues are addressed.

Types of learning strategies/ Strategies in the adoption of CSR

1. Rejection strategy: The firm shows reluctance to adopt any social work or project.

2. Adversary strategy: The firm vehemently opposes any CSR based project unless and until the pressure comes from external sources.

3. Resistance strategy: The firm works slowly and tries to show that it cannot carry on CSR due to lack of certain factors. However, if the firm is pressurized by the government, then it yields and accepts the project.

4. Compliance strategy: Once the CSR is accepted the firm follows the compliance strategy and tries to finish the project.

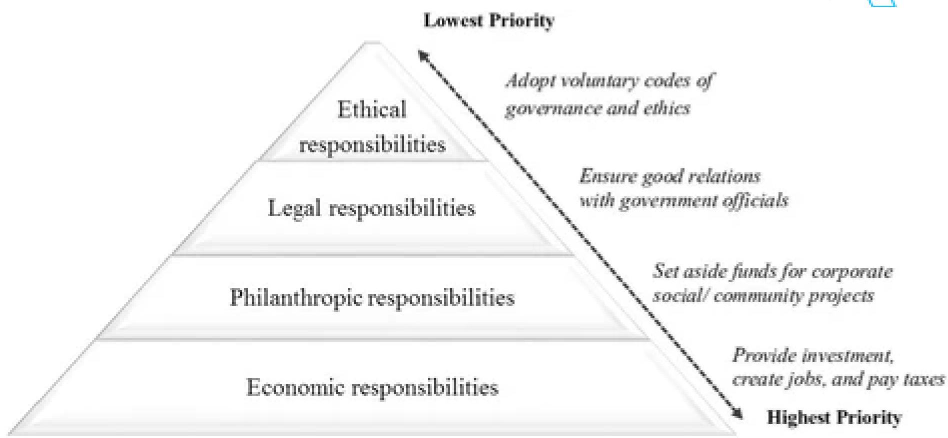
5. Accomodation strategy: This strategy helps the firm to accommodate the requests of the shareholders or Government agencies to work in certain way for the fulfillment of CSR.

6. Proactive strategy: This stage is to go ahead with the project and complete it according to the priority pattern of the firm.

3. Carroll model

A.B. Carroll developed a model based on the idea that there are four levels of social responsibility.

Image source: https://jcsr.springeropen.com/articles/10.1186/s40991-017-0015-y/figures/3



4. Environmental integrity and community health model

There is a hidden business agenda inbuilt in this model. Business people believe that if the corporate sector can positively contribute to the environmental integrity and human health, there will be greater opportunities for the expansion of business in general and this will, in turn, maximize profits. Healthy people can work more and earn more. So, consumers' spending will increase and so will the profit. Therefore, in the same form CSR is beneficial for the corporate sector.

5. Corporate citizenship model

The model posits that when a business behaves in a way that satisfies philanthropic, legal and economic responsibilities well in the corporate world, it is entitled to corporate citizenship.

To be a corporate citizen, a corporate firm has to satisfy four conditions:

a) Consistently satisfactory and sustainable performance,
b) Ethical actions,
c) Behaviour beyond the minimum requirements of law of the land and
d) Voluntary social actions that enhance the reputation of the company.

6. Stockholders and Stakeholders model

There are two types of motives: self-interest and moral duty
Productivism and philanthrophy are the two orientations of the stockholders.
Progressivism and ethical idealism are the two orientations of stakeholders
Productivists believe that the only mission of a corporation is to maximize the self-interest (profit).
Philanthropists who entertain stockholders' views propose that helping the poor and the needy can be justified in terms of morality.

<u>Corporate Governance</u>

The term 'governance' is derived from the Latin word *gubernare*, meaning 'to steer', usually applying to the steering of a ship, which implies that corporate governance involves the function of direction rather than control.
The term *governance* is more relevant for an open system. Governance is concerned with the ideology, objectives and strategy to achieve the goal. Governance is affected through certain rules and regulations.

The governance must ensure that there are neutral and strong agencies to settle the principal-agent problems which at times may lead to clash and conflicts.

Good governance must ensure justice, equality inclusive of gender, racial and economic equality, and individual freedom different types of basic rights (including human rights).

Good governance is based on **transparency and accountability**.

Governance is generally based on some cherished ideology. It may be democracy, dictatorship, communism or any other ideology.

Corporate governance comprehends the framework of rules, relationships, systems and processes within and by which fiduciary authority is exercised and controlled in corporations. Relevant rules include applicable laws of the land as well as internal rules of a corporation. Relationships include those between all related parties, the most important of which are the owners, managers, directors of the board (when such entity exists), regulatory authorities and to a lesser extent, employees and the community at large. Systems and processes deal with matters such as delegation of authority, performance measures, assurance mechanisms, reporting requirements and accountabilities.

Standard and Poors defined corporate governance as "the way in which a company organizes and manages itself to ensure that all financial stakeholders receive their fair share of a company's earnings and assets"

<u>The Organisation for Economic Cooperation and Development (OECD) provides a functional definition of corporate governance as:</u>

"Corporate Governance is the system by which business corporations are directed and controlled. *The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs. By doing this, it also provides the structure through which the company objectives are set, and the means of attaining those objectives and monitoring performance."*

<u>The report of SEBI Committee on Corporate Governance gives the following definition of corporate governance.</u>

"Corporate governance is the acceptance by management, of the inalienable rights of shareholders as the true owners of the corporation and of their own role as trustees on behalf of the shareholders. It is about commitment to values, about ethical business conduct and about making a distinction between personal and corporate funds in the management of a company".

The simplest definitions, is given by a Cadbury Report (UK). 'Corporate Governance is the system by which businesses are directed and controlled'.

Corporate governance deals with conducting the affairs of a company such that there is fairness to all stakeholders and that its actions benefit the greatest number of stakeholders. It is about openness, integrity and accountability.
Corporate governance is the coordination and maintenance of a set of relations that promote the interests of stockholders and stakeholders of a business corporation.

Corporate governance is a system of social institutions that influences the process of strategic investment in corporations that revolve around three decisions: investment, returns and control.

Professor Colin Tricker (who originally coined the term corporate governance back in 1984) made the important distinction between management and direction, stating "if management is about running business, governance is about seeing that it is run properly", which is the old distinction between doing things right and doing the right thing.

<u>The corporate governance can be summarized to cover three essential areas; conformance, performance and consensus.</u>
1. The conformance of company managers to high standards of transparency, probity, accountability and responsibility;
2. The performance of board directors in providing the strategic leadership which will sustain their companies' competitiveness locally and in the global market; and
3. The consensus (for want of a better term) which maintains the harmonious and productive relationships between the company and its host society.

<u>Note:</u>
- Corporate governance is concerned with an open-ended system, but corporate management works within the periphery of a close-ended system where manipulation of any type is not permitted.
- Corporate governance aims at doing the right things but corporate management is concerned about doing things right.
- Corporate governance gives the order and corporate management implements the order.

<u>Theories of Corporate Governance</u>

1. Agency theory

- ✓ It is based on economic concept. The theory placed shareholders as significant stakeholders.
- ✓ Agency theory as premise surrounding the relationships that exist between the owners (principals) of organizations and the managers or directors (agents) of organizations.
- ✓ The objectives of the owners are not the same as the objectives of the managers. The interest of agents might be in conflict with the interest of principal in achieving the organizational goal.
- ✓ The managers are interested in maximizing their utility functions that include pay, power and perks, the owners are interested in getting a high return on their investment.

2. Stewardship theory

- ✓ The theory is based on the basic idea of psychology and sociology. It posits that the duty of a steward is to protect and maximize the stock of wealth of the shareholders and by doing so they get their own rewards.
- ✓ The utility function of a steward is maximized only through the maximization of the shareholders' interest. There is no contradiction or conflict; rather the two utility functions have the same point of convergence.
- ✓ In a corporate set up, managers and executives are stewards. When the organization as a whole is successful, all participants are also satisfied. This is the basic essence of this theory

3. Stakeholders' theory

- ✓ This theory is based on the perception that a corporation for its effective function has to forge a number of relations with different classes of people including suppliers, consumers, employees, government and so on.
- ✓ This theory focuses on managerial decision making for the benefit of all the parties concerned.
- ✓ The theory derives its concept from organization theories and sociological human behaviour that seem to suggest that mutual help and cooperation enriches the community and organization in many ways.

4. Transaction cost theory

- ✓ The transaction theory suggests that by varying the size of the firm, its production structure, techniques and resources allocation methods, a firm can change the transaction cost.
- ✓ The theory implies that managers are opportunists and arrange transactions in their favour through many methods and manipulations.
- ✓ The theory makes an important point that it is the basic purpose of corporate governance to make the cost the lowest, reap the economies of scale and make the company highly competitive and contestable.

1. Dependency theory

- ✓ The dependency theory looks at the possibilities of development and growth of a company.
- ✓ In this context, the role of BOD can hardly be exaggerated. The directors always try to invent innovative ways and means to access new resources and make the firm more and more self-sufficient and competitive
- ✓ The theory suggests that whatever be the nature of directorship (insider or outsider), it is the duty of these directors to gather newer and newer resources for the betterment of the company. The dependency is about the procurement of resources.

2. Political theory

- ✓ It explains the involvement of government in the governance of corporations. The purpose is to get the voting support from shareholders.
- ✓ Having this objective in mind, the government in countries and in many situations participates or directs corporate decision-making and in such a situation, the allocation of

corporate power, profit and privileges are all determined by government rules, regulations and favours.
- ✓ An authoritarian government is more powerful than a democratic government in the matter of corporate governance.

7. Ethical theory of corporate governance
- ✓ The type of governance which is ethically justified and is based upon fairness and justice for all the parties.
- ✓ Ethical corporate governance distinguishes between right and wrong and concentrates on the right type of governance without hate and harm.
- ✓ It tries to eliminate all types of discrimination on the basis of caste, colour and creed. The governance is clean, accountable and transparent.
- ✓ It is a system of value and virtue-based management. It follows an ethically justified code of governance.

<u>Corporate Governance Framework in India</u>

1. **The Companies Acts 2013** has provisions concerning Independent Directors, Board Constitution, General meetings, Board meetings, Board processes, Related Party Transactions, Audit Committees, etc.
2. **SEBI (Securities and Exchange Board of India) Guidelines** ensure the protection of investors and have mandated the companies to adhere to the best practices mentioned in the guidelines.
3. **Accounting Standards issued by the ICAI** (Institute of Chartered Accountants of India) wherein the ICAI is an autonomous body and issues accounting standards. The disclosure of financial statements is also made mandatory by the ICAI backed by the Companies Act 2013, Sec. 129.
4. **Standard Listing Agreement of Stock** Exchanges applies to the companies whose shares are listed on various stock exchanges.

Secretarial Standards Issued by the ICSI (Institute of Company Secretaries of India) issues standards on 'Meetings of the board of Directors', General Meetings', etc.. The companies Act 2013 empowers this autonomous body to provide standards which each and every company is required to adhere to so that they are not punished under the Companies Act itself.

<u>Clause 49 of the SEBI</u>

The clause 49 of SEBI has been introduced with a view to enhance and strengthen the power of the independent directors who are the members of the Board.

The clause 49 of SEBI was amended on the August 26, 2003, which had made it mandatory for every public company listed on an Indian stock exchange to sign.

It has been pronounced that every company is required to comply with the requirements of corporate governance and that this should be primarily done through increasing powers and responsibilities of Board members, making them more accountable and also by consolidating the powers of the Audit committee

The aim of such changes is to make the Indian Companies more strong in the light of rapid globalization and industrialization.

The primary concerns of the amended Clause 49 can be summed up as follows:

Board of Directors The BOD is required to frame a code of conduct for all Board members and senior management and each of them have to annually affirm and establish an overall compliance with the code.

Independent Directors shall be 1/3 to ½ depending upon whether the Chairman of the board is at a non-executive or an executive position.

Non-Executive Directors The total tenure of the office of non-executive directors is now limited to three terms of three years each.

Audit Committee shall be responsible for the financial statements and the draft audit report of management discussion and analysis of financial condition and the result of operations. Also for the reports of compliance with laws and risk management, as well as management letters and letters of weaknesses in internal controls issued by statutory and internal auditors/appointment, removal and terms of remuneration of the chief internal auditor.

Subsidiary Companies shall comprise of 50% non-executive directors and 1/3 and ½ of independent directors depending on whether the chairman is non-executive or executive.

Disclosures The issues to be disclosed are contingent liabilities, the basis of related party transactions, risk management matters and also the proceeds from initial public offering as well as the remuneration of directors.

Certifications Any certification would be inclusive of the review of the necessary financial statements and director's report, the overall established and maintained internal controls. Every matter must be disclosed to the audit committee, regarding the accounting policies and standards that are followed by the company during a financial year.

Whistle Blower Policy must be communicated to every employee and whistle blowers should be protected from unfair treatment and termination.

STRATEGIC MANAGEMENT

STRATEGY

- At first, the word was used in terms of Military Science to mean what a manager does to offset actual or potential actions of competitors
- Originally, the word strategy has been derived from Greek 'Strategos', which means generalship. The word strategy means the art of the general.
- Strategy is the direction and scope of an organization in a changing business environment through the configuration of its resources and competence with a view to meeting stakeholder expectation.

- Strategy is the grand design or an overall 'plan' which an organisation chooses in order to move or react towards the set objectives by using it resources.
- *According to Ansoff,* "Strategy is a rule for decisions."
- *According to Kenichi Ohame,* "Strategy is the way in which a corporate endeavours to differentiate itself positively from its competitors, using its relative strengths to better satisfy customer needs."
- *According to William F Glueck,* "Strategy is defined as a unified, comprehensive and integrated plan designed to assure that the basic objective of the enterprise is achieved."

Alfred D Chandler (1962)
"The determination of the basic long-term goals and objectives of an enterprise and the adoption of the courses of action and the allocation of resources necessary for carrying out these goals."
Three aspects from this definition: Determination of basic long-term goals and objectives,Adoption of courses of action to achieve these objectives, and Allocation of resources necessary for adopting the courses of action.

Michael E Porter (1996)
He opines that the core of general management is strategy, which he elaborates as: *"developing and communicating the company's unique position, making trade-offs, and forging fit among activities".*

Strategic management is defined as a systematic approach to positioning the business in relation to its environment to ensure continued success and offer security from surprises.

Strategic management is that set of managerial decisions and actions that determine the long-run performance of a corporation.

Strategic management is a stream of decisions and actions which lead to the development of an effective strategy or strategies, which help to achieve corporate objectives.

The term 'strategic management' is used to denote a branch of management that is concerned with the development of strategic vision, setting out objectives, formulating and implementing strategies and introducing corrective measures for the deviations (if any) to reach the organization's strategic intent. It has two-fold objectives:

- To gain competitive advantage, with an aim of outperforming the competitors, to achieve dominance over the market.
- To act as a guide to the organization to help in surviving the changes in the business environment.

Here, changes refer to changes in the internal environment, i.e. within the organization, introduced by the managers such as the change in business policies, procedures etc. and changes in the external environment as in changes in the government rules that can affect business, competitors move, change in customer's tastes and preferences and so forth.

Strategic management is the continuous planning, monitoring, analysis and assessment of all that is necessary for an organization to meet its goals and objectives. Fast-paced innovation, emerging technologies and customer expectations force organizations to think and make decisions strategically to remain successful.

Thus, strategic management can be defined as follows: "Strategic management is the process of systematically analysing various opportunities and threats vis-à-vis organisational strengths and weaknesses, formulating, and arriving at strategic choices through critical evaluation of alternatives and implementing them to meet the set objectives of the organisation".

The strategic management process involves analysing cross-functional business decisions prior to implementing them. It also includes:-

- Analyzing internal and external strengths and weaknesses.
- Formulating action plans.
- Executing action plans.
- Evaluating to what degree action plans have been successful and making changes when desired results are not being produced.

Major steps in strategic management process

First stage

1. Preparation of Mission
2. Setting of Objectives
3. Fixation of Goals
4. Policies
5. Analysis of environment

Second stage

6. Formulation of strategies
7. Implementation of strategies

Third stage

8. SWOT analysis
9. Evaluation

Components of a Strategy Statement

1. **Strategic Intent:** An organization's strategic intent is the purpose that it exists and why it will continue to exist, providing it maintains a competitive advantage. Strategic intent gives a picture about what an organization must get into immediately in order to achieve the company's vision. It motivates the people. It clarifies the vision of the company. It involves the following :

a) Creating and communicating a vision.
b) Designing a mission statement.
c) Defining the business.
d) Setting the objectives

Strategic intent: Is the intention of organization what the org wants to do in long term..vision and mission and objectives express the strategic intent of the organization.

2. **Vision:** Vision statement presents the values, philosophies and aspirations that guide organizational action. Vision of a company is rather a permanent statement articulated by the CEO of the company who may be Managing Director, President, Chairman, etc. A vision statement identifies where the organization wants or intends to be in future or where it should be to best meet the needs of the stakeholders. It describes dreams and aspirations for future. For instance, **Microsoft's vision** is "to empower people through great software, any time, any place, or any device." **Wal-Mart's vision** is to become worldwide leader in retailing.

A vision is the potential to view things ahead of themselves. It answers the question "where we want to be". It gives us a reminder about what we attempt to develop. A vision statement is for the organization and it's members, unlike the mission statement which is for the customers/clients. In order to realize the vision, it must be deeply instilled in the organization, being owned and shared by everyone involved in the organization.

<u>An effective vision statement must have following features-</u>

a. It must be **unambiguous** and **clear**.
b. It must **harmonize** with organization's culture and values.
c. The dreams and aspirations must be **rational/realistic**.
d. Vision statements should be **shorter** so that they are easier to memorize.

Vision: Is your dream. It is for you and the other members of your company, not for your customers or clients.

3. Mission Statement: Mission statement is the statement of the role by which an organization intends to serve stakeholders. It describes why an organization is operating and thus provides a framework within which strategies are formulated. It describes what the organization does (i.e., present capabilities), who all it serves (i.e., stakeholders) and what makes an organization unique (i.e., reason for existence).

A mission statement differentiates an organization from others by explaining its broad scope of activities, its products, and technologies it uses to achieve its goals and objectives. It talks about an organization's present (i.e., "about where we are").

For instance, **Microsoft's mission** is "To help people and businesses throughout the world to realize their full potential." **Wal-Mart's mission** is "To give ordinary folk the chance to buy the same thing as rich people." Mission statements always exist at top level of an organization, but may also be made for various organizational levels. Chief executive plays a significant role in formulation of mission statement. Once the mission statement is formulated, it serves the organization in long run, but it may become ambiguous with organizational growth and innovations.

Mission statement has three main components-a statement of mission of the company, a statement of the core values that shape the acts and behaviour of the employees, and a statement of the goals and objectives.

Mission: The reason for existence in commercial terms. Mission is the purpose for which organization is established. It includes both a statement of organizational philosophy and purpose.

Features of a Mission

- It should be **feasible** and **attainable.** It should be **clear** enough to take action.
- It should be **inspiring**. It should be **precise** enough.
- It should be **unique** and distinctive to leave an impact in everyone's mind.
- It should be **analytical**, i.e., it should analyze the key components of the strategy.
- It should be **credible**, i.e., all stakeholders should be able to believe it.

4. Goals & Objectives: A goal is a desired future state or objective that an organization tries to achieve. A goal is a predetermined objective. Goals specify in particular what must be done if an organization is to attain mission or vision. Goals make mission more prominent and concrete. They coordinate and integrate various functional and departmental areas in an organization.

Well-made goals have following features-

a. These are precise and measurable.
b. These look after critical and significant issues.
c. These are realistic and challenging.
d. These must be achieved within a specific time frame.
e. These include both financial as well as non-financial components.

Objectives are defined as goals that organization wants to achieve over a period of time. Objectives are defined as the ends which the organization seeks to achieve. It is a measure of efficiency of the resource conversion process. Objectives are the basic steps to achieve goal. These are the foundation of planning. Policies are developed in an organization so as to achieve these objectives. Policy is a guide to action. Formulation of objectives is the task of top level management.

Effective objectives have following features-

a. These are not single for an organization, but multiple.
b. Objectives should be both short-term as well as long-term.
c. Objectives must respond and react to changes in environment, i.e., they must be flexible.
d. These must be feasible, realistic and operational.

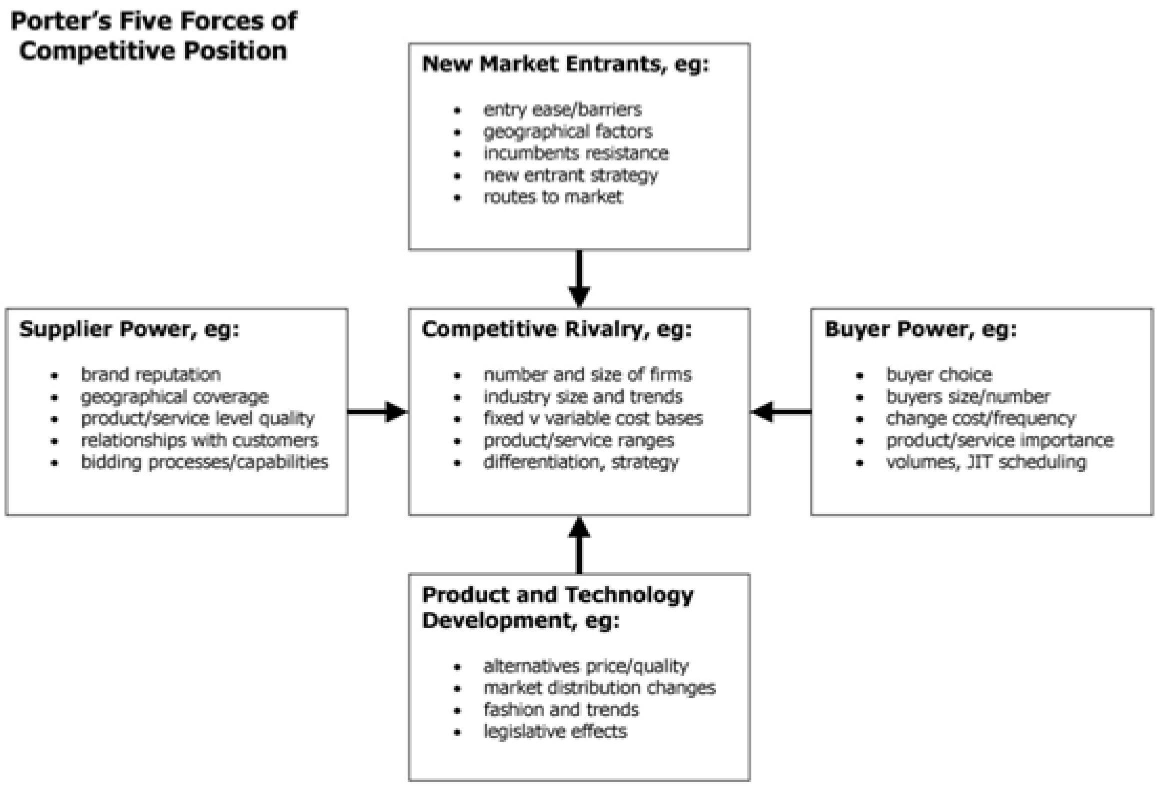
5. Core values are the fundamental beliefs of a person or organization. These guiding principles dictate behaviour for internal conduct as well as its relationship with the external world and can help people understand the difference between right and wrong.

They may be beliefs of top management regarding employees welfare customer's interest and shareholder's wealth. The beliefs may have economic orientation or social orientation. The core values of Tata's are different from core values of Birla's or Reliance. The entire organization structure revolves around the philosophy coming out of core values. A few characteristics of core purpose are as follows:

- It is the overall reason for the existence of organization
- It is why of an organization
- This mainly addresses to the issue which organization desires to achieve internally
- It is the broad philosophical long term rationale
- It is the linkage of organization with its own people

Porter's five forces model

Five forces model was created by Michael Eugene Porter in 1979 to understand how five key competitive forces are affecting an industry. It is an analysis tool that uses five industry forces to determine the intensity of competition in an industry and its profitability level.



<u>The five forces identified are:</u>

1. Threat of new entrants- This force determines how easy (or not) it is to enter a particular industry. If an industry is profitable and there are few barriers to enter, rivalry soon intensifies. When more organizations compete for the same market share, profits start to fall. It is essential for existing organizations to create high barriers to enter to deter new entrants.

<u>Threat of new entrants is high when:</u>

- Low amount of capital is required to enter a market;
- Existing companies can do little to retaliate;
- Existing firms do not possess patents, trademarks or do not have established brand reputation;
- There is no government regulation;
- Customer switching costs are low (it doesn't cost a lot of money for a firm to switch to other industries);
- There is low customer loyalty;
- Products are nearly identical;
- Economies of scale can be easily achieved.

2. Bargaining power of suppliers - Strong bargaining power allows suppliers to sell higher priced or low quality raw materials to their buyers. This directly affects the buying firms' profits because it has to pay more for materials.

<u>Suppliers have strong bargaining power when:</u>

- There are few suppliers but many buyers;
- Suppliers are large and threaten to forward integrate;
- Few substitute raw materials exist;
- Suppliers hold scarce resources;
- Cost of switching raw materials is especially high.

3. Bargaining power of buyers -Buyers have the power to demand lower price or higher product quality from industry producers when their bargaining power is strong. Lower price means lower revenues for the producer, while higher quality products usually raise production costs. Both scenarios result in lower profits for producers.

Buyers exert strong bargaining power when:

- Buying in large quantities or control many access points to the final customer;
- Only few buyers exist;
- Switching costs to other supplier are low;
- They threaten to backward integrate;
- There are many substitutes;
- Buyers are price sensitive.

4. Threat of substitutes - This force is especially threatening when buyers can easily find substitute products with attractive prices or better quality and when buyers can switch from one product or service to another with little cost. For example, to switch from coffee to tea doesn't cost anything, unlike switching from car to bicycle.

5. Rivalry among existing competitors - This force is the major determinant on how competitive and profitable an industry is. In competitive industry, firms have to compete aggressively for a market share, which results in low profits.

Rivalry among competitors is intense when:

- There are many competitors;
- Exit barriers are high;
- Industry of growth is slow or negative;
- Products are not differentiated and can be easily substituted;
- Competitors are of equal size;
- Low customer loyalty.

Although, Porter originally introduced five forces affecting an industry, scholars have suggested including the *sixth force:*

***Complements**:* Complements increase the demand of the primary product with which they are used, thus, increasing firm's and industry's profit potential. For example, iTunes was created to complement iPod and added value for both products. As a result, both iTunes and iPod sales increased, increasing Apple's profits.