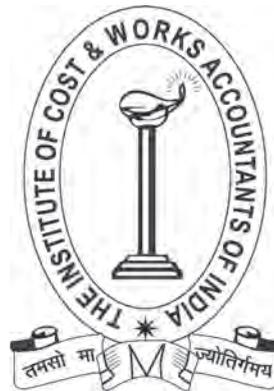


# MANAGEMENT ACCOUNTING STRATEGIC MANAGEMENT

FINAL: PAPER- 13

GROUP - III

STUDY NOTES



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# Paper 13

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# STUDY NOTE - 1

## Introduction of Business Strategy

### PART-A

#### Major Contents of Part A:

- Corporate Planning; Strategic Planning; Operational Planning
- Business Policy Planning
- Business Strategy
- Strategic Management and Strategic Management Process
- Mission, Vision and Objectives; Goals and Targets, Values
- Functional Strategies and Strategic Levels in Organisation
- Grand Strategy
- Strategic Business Units (SBU) & Core Competence
- Environmental Analysis
- Roles of different Strategists
- Profit Gap, Sales Gap, Risk Gap and Other Strategies

#### **Meaning and implications of Corporate Planning:**

Business objectives of an organisation will be set and modified from time to time suitably to the business and economic environment. When business environment and economic scenarios are changing, it would be the “corporate planning process” which would be the blue print document to take the company on the high growth path. After the initial period of the company’s incorporation, there would be changes in the business and economic scenario from time to time. Changes take place to suit the developments and growth in the economy. The successful organisation will be active and alert to these changes. In the real sense, to manage, the changes will be one of the biggest strengths of an organisation.

To manage the changes, there would be all-round adjustments and improvements in each and every segment of the activity of an organisation. Be, it sales and marketing or human resource development or fund management or commercial and materials management or projects and their management, corporate planning takes into consideration all these into it’s blue print document for strict adherence and implementation, throughout it’s plan period so as to achieve the corporate objectives.

Thus corporate planning is the means of achieving the business objectives.



Corporate planning consists of:

- (i) determining the strategy or basic commercial and other policies which a company should pursue over the long term;
- (ii) determining attainable yet challenging business goals for a complete enterprise over both long and short term which express the strategies specified;
- (iii) determining, for every function (production, marketing and sales) and/or business enterprises, mutually consistent subsidiary goals which will in total equate with corporate goals;
- (iv) providing and programming the application of total resources (finance, R&D, management, manpower) to achieve subsidiary and corporate goals;
- (v) monitoring actual performance to verify that programmes and goals are achieved;
- (vi) Up-dating or revising strategies, goals and programmes periodically.

A good system of corporate planning requires on the part of the management:

- (i) Ability to think of the future, to anticipate it and willingness to accept change,
- (ii) Understanding of the relationship between the organisation and its environment,
- (iii) Appreciation of the inter-dependence and inter-relationship of the different operations within the organisation,
- (iv) Awareness of the need for total problem-solving,
- (v) Ability to adopt systematic, conscious and reliable approaches to problems,
- (vi) Ability to create a proper environment for planning.

### **Characteristics of Corporate Planning:**

- It is a long-term planning exercise in the organisation covering all activities such as - marketing, production, human resource, commercial, financing, projects planning and technological developments.
- It takes into consideration, national and international level competitiveness in cost and quality so as to emerge as a global player.
- It takes into account the latest developments in business and economic scenario.
- It is prepared for a long period say five years and above.
- It is prepared for the organisation as a whole based on the corporate vision and corporate mission together with growth strategy.

### **Steps Involved in Corporate Planning:**

There are five major steps in corporate planning.

#### **1. Environmental Scanning:**

##### **(a) External Environment:**

Business environment is scanned to secure up-to-date information on opportunities



and threats revealed by the changing environmental forces, such as customers, customer needs, competition, economic, social and political climate, ecology, and technology. The situation analysis indicates where we are, how we got here and where we are now going.

**(b) Internal Environment:**

Marketers must also have adequate knowledge of internal situation through self-analysis, i.e., on corporate strength and weakness. The corporate resources are the limitations on exploitation of marketing opportunities knocking at our door. The environmental opportunities may not become specific corporate opportunities. Company opportunities constitute a set of marketing undertakings in which a particular company has competence and capability to enjoy the competitive benefit because of its particular and unique market approach. There should be a happy marriage between the company resources and company opportunities so that the marketer can accomplish the set of corporate goals.

The internal and external environmental scanning offers us SWOT, i.e., Strengths and Weaknesses as well as Opportunities and Threats. Threats are considered as challenges to be met or overcome by strategic planning. Marketing information and research enables us to scan external environment. Sales audit and cost analysis enable us to study internal environment.

**2. Defining Mission, Vision, Values:**

P. Drucker, management guru, wants mission to give answers to:

- Our present business,
- Our present customers,
- Values to be delivered to customers to secure their delight,
- Business we want to develop, and
- Business we ought to take up.

**Mission:** A statement of intentions what a company wants to create and through which lines of business.

**Vision:** A vividly descriptive Image of what a company wants to be or wants to be known for. It is a sweet dream to become reality.

**Purpose or Objective:** An articulation of functions that a company intends to fulfill through its business-values. The set of cherished notions and beliefs that guides every move, every activity that a member or the company makes. This covers ethical and moral values and values offered to the customer to fulfill their expectations. This also creates a bright image and credibility of the company. Skills are based on values.

**Goal:** The business targets that a company's mission, vision, and purpose are translated into the reality Strategy: The methods that a company employs to achieve the goal that its vision provides.



**Note:** Where there is no vision, the organisation and the people perish. Working without a vision is like putting together a jigsaw puzzle without having the picture before you.

You do need a vision, call it 2020. A vision of an organisation to its people is an articulation where it is that their leader is taking them. Vision offers a compelling method for forging employees into an empowered, highly self-motivated and self-managing team. Vision should be reachable in the minds of your people-who are themselves involved.

**Examples of Mission Market-Oriented Business giving a nice definition of business.**

- Transport Company: We are movers of people/goods.
- Telecommunication: We offer reliable, efficient and cost-effective services in telecommunications.
- Xerox: We help refining office productivity by automating offices.
- Cinema Company: We market entertainments.
- Air-conditioning: We provide climate control in homes, offices, and factories.
- Cosmetic Co.: In the drug shops we sell hope.
- Levy Strauss: We offer fashion, comfort and durability.

**3. Setting Objectives:**

The mission answers the question,

- What is our business?

The objectives answer the question,

- What do we want to achieve?

Objectives must be clear, ambitious but realistic, measurable and time-bound. The mission points out the needs to be served. The objectives indicate performance standards e.g., market share, profit, services, customer satisfaction, etc. Please note that objectives or goals are the desired or planned outcome.

**4. Identifying Strategic Business Unit (SBU):**

Within a multi-product or multi-business corporation, we may have one or more business areas or SBU. In the corporation there may be more than six divisions but in reality we may have only three distinct businesses. Hence, for strategic planning all divisions will be grouped into only three strategic business units. The concept of SBU has unique importance in corporate strategic planning. The products that form a planning unit (SBU) should have in common major strategic features such as target markets, distribution channels, advertising and sales force strategies. Thus, SBU is a separate division for a major product or a product line or a market in a multi-product or a multi-business organisation. It is incharge of conducting situation analysis, determining marketing objectives, selecting target market, measuring the market and designing a strategic marketing-mix.

In order to identify SBU, a business is defined on the basis of consumer-orientation (not product-orientation) in terms of three dimensions:



- Customer needs to be met,
- Group of customers to be served,
- Product or service to fulfil those needs.

The SBU has three features:

- It is a collection of related products meeting similar needs.
- The unit has its own rivals and it wants to surpass them through best marketing strategies.
- The manager of SBU organisation is directly responsible for strategic marketing planning, control and profits.

Each SBU manager is given a set of strategic planning goals and the requisite finance. The manager will present SBU marketing strategic plan to the corporation which will give its sanction with a few modifications, if essential. The manager of SBU will formulate a distinctive plan of marketing objectives and strategies, distinctive marketing-mix for the target market, i.e., chosen market segment. Each SBU will have its own distinct mission, competition and strategy.

General Electric Corporate Planning model pioneered Strategic Business Unit (SBU) concept. It divided 200 odd departments into a limited number of SBUs.

The concept of SBU provides precise and practical direction to the process of corporate strategic planning. In India SBU concept is adopted by big businesses in corporate strategic planning.

**Note:** SBU is a unit in charge of strategic marketing planning in a big corporation.

## 5. Selecting Appropriate Strategies:

Once the corporation has planned where it wants to go, the next step is to answer the question “How are we going to get there”? Corporate strategies supply the best answer to this vital question, viz., the best means to achieve the desirable goals and fulfill the mission and vision.

There are four alternative strategies before the corporation of an SBU:

- Invest Strategy: Marketing efforts are intensified further to strengthen the SBU or the enterprise.
- Protect Strategy: The SBU will be given help to maintain its present position in the market.
- Harvest Strategy: The SBU is used as a cash-flow source to help other SBUs to grow or maintain the position.
- Divest Strategy: The sick or unwanted SBU may be just sold out and the corporation gets rid of the SBU.



## Long Range Planning:

Corporate planning involves necessarily long range planning. But they are not synonymous. All long range plans are not corporate plans. On the other hand, corporate planning is concerned with long range planning. Similarly corporate planning and strategic planning are not synonymous. Corporate planning can be divided into two parts - deciding corporate objectives and then determining corporate strategies. Strategic planning can be considered as the second part of corporate planning. Long range planning refers to strategic planning, though this is not correct. Long range planning is of two types: one is called "long range action or operational planning," and the other, "long range strategic planning," In action planning, detailed, co-ordinated action programmes are developed for a specified-time. Planning group provides guidance to operating units which develop a plan. The various aspects such as budgeting, profit goals, capital expenditure and revenue expenditure programmes are prepared in agreement with the different units of the organisation. It should be remembered, however, that a typical long range action plan is much more comprehensive than mere budgeting. A long range action plan consolidates various short term action plans designed by various operating units. Strategic planning is different from long range action planning. In the former, current major decisions are weighed by an in-depth study of long term environmental changes since strategic planning takes into account long term changes and their possible effects on different assumptions and policies. It facilitates the organisation to adapt itself to future conditions and helps the top management explore new ideas and innovations such as new entry into markets, new channels for growth and diversification, areas of gains and pitfalls, measures to be adopted in order to stand firmly amidst the teeth of competition.

There are three stages of corporate development:

- (i) The organisation may be in an infant stage. Possibly it may be exclusively proprietary with scant financial resources, relatively small risk simple operations, easy markets of entrepreneurship. The business may involve short-term operations and apparently witness no signs of "danger ahead". It may sound paradoxical to say that most of the bankruptcies shape at this stage. If the business does not flourish, it has to perish and organisation has to disappear from the business scene. Although "small is beautiful", it is painful in actual practice and even ugly, because it has problems of its own which are often found to be insurmountable,
- (ii) At this stage the organisation operates with a fairly good size and can be said to be at an advanced stage and is in a position to engage the services of a few professionals. There may be various functional units and as many profit centres though of course all profit centres maybe geared up around one business. Although it is immune from the adverse impact of external forces and even less vulnerable to failures of bankruptcy, it often suffers on account of its concentration on a single business. It does not pay "to lay all eggs in one basket". Their corporate planning philosophy is to "try diversification" but take it gradually.
- (iii) At this stage, organisations are fairly of a large size and their activities complex. With its vast financial resources at its command, it can withstand the adverse impact of external forces. They are relatively stable, and indulge in diversification in multiple directions and explore every opportunity to strive hard for its success. However, the major hurdle of



such huge organisations is their inflexibility and, with all checks and counterchecks, they fall to their own surprise. This is typically described as a “mighty collapse”. Corporate planning and its application depend upon the category of organisations or the stage of development the organisation is in. For example, whereas long range planning need not be prescribed for small organisations, it may be worthwhile of the Owner-Manager to find time to “stop and stare”. This might provide him an opportunity of introspection in order to be able to face foreseeable adversities.

A lot of corporate planning is necessary so as to be able to develop from the first group of companies into the second group of companies. As the organisation matures in the second stage, it may gradually introduce long range strategic planning with the help of systematic diversification. Corporate planning, therefore, helps organisations to grow from one stage of transition to another with a definite idea of what it is trying to do. Corporate planning would ill advise organisations to be unsystematic and jumpy. A good blending of long range action planning and strategic planning should help the third group of companies. It is at this stage that the organisation is in a position to see its rivals clearly and know where it stands vis-à-vis its competitors. Strategic planning works up better at this stage than long range action planning.

The corporation has a permanent entity, as it is an artificial person. Long range planning is closely connected with the concept of the corporation as a long-living institution. It is an agent of change and owes part of its rise to increasing research and development. It reflects strategic approach to management. Long range planning has been high on the hit parade at management meetings and conferences and, as a technique, it promises to be the next addition to the formula for progressive management. It is that activity in a company which sets long range goals for the firm and then proceeds to formulate specific plans for attaining these goals. It is a process for making a choice so as to make an effective management of today.

Long range planning is the one really new technique left to management that can give a company a major competitive advantage. Peter F. Drucker explains that it is easier to define long range planning by “what it is not than by what it is”.

He spells out the following characteristics of long range planning:

- (i) It is not forecasting. It is not “master minding” the future. Human beings can neither predict nor control the future.
- (ii) It does not deal with the futurity of present decisions. Decisions exist only for the present. The question that faces long range planning is not what we should do tomorrow. It is what we have to do today to be ready for an uncertain tomorrow.
- (iii) Long range planning is not an attempt to eliminate risk. It is not even an attempt to minimise risk.

On the contrary, risk-taking is the essence of economic activity. The end-result of successful long range planning must be the capacity to take a greater risk and improve entrepreneurial performance. For long range planning the business enterprise is significant and rather amazing novelty because it is the first human institution having the purpose of bringing out change. But there are several things which are new, which have created the need for organised, systematic and specific process that we call long range planning.



- (i) The time span of entrepreneurial and managerial decisions has been lengthening so fast and so much as to make necessary systematic assessment of uncertainty and risk of decisions. This lengthening of the time span of commitment is one of the most significant features of the modern age. It underlines our economic advances. It has changed the collective character of entrepreneurial decisions.
- (ii) Another new feature is the speed and risk of innovation. A technological slow-moving, if not essentially stable, economy has become one of violent technological flux, rapid obsolescence and great uncertainty.
- (iii) There is the growing complexity both of the business enterprise itself, and of the economy and society in which it exists. There is the growing specialisation of work which creates increasing need for common vision, common understanding and common language, without which top management decisions, howsoever right, will never become effective action.
- (iv) Typical businessman's concept of the basis of entrepreneurial decisions is a misconception. Most businessmen still believe that these decisions are made by top management. At most, top organisation of professionals of highly specialised knowledge exercising autonomous responsible judgement. For this organisation to be functioning, two things are needed: knowledge by the entire organisation of what the direction, the goals, the expectations are; and knowledge by top management of what the decisions, commitments and efforts of the people in the organisation are, This needed focus - a model of the relevant in internal and external environment - a long range plan can provide.

Long range planning is more than organisation and analysis of information. It is the decision-making process. There are certain requirements of long range planning.

Risk - taking entrepreneurial decisions always embody the same eight elements:

- (i) Objectives: Any entrepreneurial, decision, let alone the integrated decision system, we call a "long range plan" has objectives, conscious or otherwise.
- (ii) Assumptions: These are what are believed by the people who make and carry out decisions to be "real" in the internal and external universe of the business.
- (iii) Expectations: These are future events or results considered likely or attainable.
- (iv) Alternative courses of action: Every decision is a value judgement. Two alternatives deserve special mention. One is the alternative of no action and the other is the very important choice between adaptive and innovating action.
- (v) The next element in decision-making process is the decision itself.
- (vi) Every decision is, of necessity, a part of the decision structure with respect to allocations of scarce manpower such as R & D people.
- (vii) Every decision has an impact stage. This impact consists of action and reaction. It requires effort to know the weaknesses and the stress points-and the impact it has on the outside -in the market in the supply structure, in the community and so on.
- (viii) Results: Long-range planning must be described in terms of it's specific new knowledge content.



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## **Corporate Planning vs. Strategic Planning and Strategic Management:**

Corporate planning gets affected by the strategic planning and strategic management. In fact, with the strategic planning and strategic management approach, corporate planning becomes more scientific and effective.

With this approach, corporate planning becomes more:

- Cost effective
- Realistic
- Scientific
- Effective
- Customers oriented
- Value addition oriented

These are some of the broad attributes and qualitative aspects of strategic planning and strategic management, which enrich and benefit the corporate planning as formulated.

## **Corporate Planning vs. Business Policy Planning:**

There is a deep relationship between corporate planning and business policy planning. Business policy may be in the following area:

- Production policy
- Marketing policy
- Personnel policy
- Pricing policy

These are self explanatory. Still, the inter-relationships between the corporate planning and business policy planning are discussed as under. In each activity, the business policy planning has its impact on corporate planning.

Marketing policy will affect the corporate planning for:

- Market coverage
- Segmentation of market
- Customers services
- After sales service
- Marketing mix
- Quality
- Value addition
- Sales planning

All these parameters will affect the corporate planning.



Similar to the marketing policy, other business policy planning will affect the formulation and preparation of corporate planning.

### **Business Policy Planning and Strategic Planning:**

Business policy is set of rules for functions and the responsibility of senior management towards those functions. For example, management functions such as marketing, finance, HR, production always have some predefined rules or guidelines and those rules are known as business policy of that respective area.

Decision-making is the primary task of a manager. While making decisions, it is common that managers consult the existing organisational policies relevant to the decisions. Thus, policies are intended to provide guidance to managers in decision-making. It has to be remembered that a policy is also a decision. But it is a one time standing decision in the light of which so many routine decisions are made.

### **Importance of Policies:**

Policies provide the broad framework within which decisions are to be made. In the absence of appropriate policies, managerial decision-making may be analogous to “Reinventing the Wheel” every time. Sound policies thus save lot of time in decision-making and avoid confusion.

Since policies specify the boundary conditions of decisions, it goes without saying that when decisions are actually made, they conform to the policy relevant to the decision. Thus, decisions relating to a particular operational area of the business tend to be consistent. If the policy of an organisation is to face competition with quality products, the emphasis naturally will be on issues relating to improving the quality of the product. All the decisions that affect the product quality are normally taken in the light of the explicit policy. Policies developed carefully and understood perfectly result in consistency in planning. As a result, organisational resources would be deployed in those areas where they find a better use.

### **Types of Policies**

Policies come about in any organisation in different ways. Based on their source, Koontz and O’donnel have classified policies under the following types.

**Originated policies:** Originated policies are the result of top management decisions. To guide the actions of the subordinates, top management formulates policies for the important functional areas of business such as Production, Marketing, Finance, Personnel and so on. These policies basically stem from the organisational objectives. They may be broad or specific depending on the centralisation or decentralisation of authority. If they are broad, they allow the subordinates some operational freedom. On the other hand if they are specific they are implemented as they are.

**Appealed Policies:** At times a manager may be in dilemma whether he has the authority to take a decision on a particular problem. There may not be precedents to guide him. In such a case, he appeals the matter to his superiors for their thinking. Thus, appeals are taken upwards



till they reach the appropriate level in the hierarchy for a decision. The decision taken by the higher-ups, thus becomes a ruling. For example, during festival seasons, the manager at the branch level may be in a dilemma to offer discount to the customers. There may not be any explicit policy to guide him. But to meet competition in a particular market situation where competitors offer discounts, top management, on the basis of an appeal made by the branch manager may allow him to offer discount. Unless otherwise stated, it becomes an unwritten policy and guides the manager's decision-making in all such future situations.

**Implied Policies:** As in the above case, there may not be specific policies for all the contingencies. Managers draw meanings from the actions and behaviour of their superiors. In a particular situation, a manager may go all out to help a customer who is in a difficult situation. If customer service is on top of the agenda of the organisation, there may not be any objection from the top management to the stand taken by the lower level manager in support of the customer. Though there is no explicit policy, managers may assume it in a particular way and go about in their day-to-day operations.

**Externally Imposed Policies:** These are the policies imposed by the agencies in the external environment like government, trade unions, industry associations, consumer councils, etc. These agencies, to protect the interests of the respective groups may lay down certain policies to be followed by the business. As the interaction of the business with external environment is increasing, one can find many policies thus coming into being in any modern business. For instance, the recruitment policy of the organisation is influenced by the government's policy towards reservations to weaker sections. Anti pollution measures, concern for the quality of the product and customer service also falls in this category.

**Principles of Policy Making:** Policies help to ensure that all units of an organisation operate under the same ground rules. They facilitate co-ordination and communication between various organisational units. This is possible because policies make consistency in action possible. In view of the importance of policies in guiding executive behaviour, they have to be formulated carefully. In fact, policy formulation is one of the important executive responsibilities. Effectiveness of policies, therefore, lies in understanding the following principles underlying policy formulation.

**Define the Business:** Correct definition of the business provides clarity to the policies. Two questions have to be asked in this regard, what is our business? What kind of business are we in? Many businesses have failed because they did not attempt to seek answers to these simple and basic questions. Gramophone record companies for long did not realise that they are in the entertainment business. Hence they are now here in the corporate history. To define the business, a company must take a close look at its basic operations and analyse its major strengths and weaknesses in all the functional areas like marketing, product development, finance, and public relations. Such an exercise enables the enterprise to correct its weaknesses, if any, and to capitalise on its strengths.

**Assess Future Environment:** Future environment of the business has to be forecasted. A realistic estimate of the future trends in matters relating to technology, economic and market conditions, political stability, etc. is essential for policy formulation. As many people would agree, forecasting is a difficult task. Instances are not rare, where the best of the forecasts turned out to be just intentions. It is interesting to note that sometimes products which were predicted



to be instant failures by the so called market surveys proved to be run-away successes. The 'Syntax' water tank is a classic example where the product defied the gloom predicted by the market research. However, examples of this sort are few and far between.

**Ensure availability of Resources:** Formulating policies in an ambitious way without regard to the ground realities lands you in trouble. You would encounter too many problems while implementing the policies. As a result, policies do not serve the intended purpose. For example, if the policy of the organisation is to cash in on the new opportunities, it does not mean that you can enter any Held thrown open by the government. You have to assess yourself as to how strong you are in terms of resources required. Otherwise it amounts to overstretching.

**Communicate the policies:** The chief objective of many policies is to help managers in decision-making and to ensure consistency in action. As such, policies have to be communicated to all those who are to take decisions. The policy of the organisation towards competition, for instance has to be communicated to the people in the marketing department. Otherwise there will not be proper synchronisation between the policy and action.

### Process of Policy Formulation:

As mentioned earlier, the basic intention of policies is to help executive thinking in decision-making. Policies are formulated for all the key functional areas of business like production, marketing, finance, personnel and so on. Effectiveness and consistency of decisions in all these areas depend on how well the policies are formulated and understood. A policy is a plan. Therefore, the steps involved in policy formulation are similar to the steps in planning. Though policies vary, in respect of scope, the process of policy formulation usually involves the following steps:

- (i) **Corporate Mission:** Corporate mission specifies the purpose for which the organisation exists. It is natural, therefore, that all the activities of the organisation are geared towards the achievement of the mission. The mission statement provides the direction to the organisation. As such, thorough understanding of the corporate mission is the starting point for policy formulation.
- (ii) **Appraisal of the Environment:** Integration of the organisation with the environment is the key function of the management. The nature of environment and the various forces in it that affect the business have to be analysed.  
It includes collection of relevant information from the environment and interpreting it's impact on the future of organisation.
- (iii) **Corporate Analysis:** While the focus in environmental appraisal is on the external factors of the business, corporate analysis takes into account the internal factors. Corporate analysis discloses strengths and weaknesses of the organisation and points out the areas that have potential.
- (iv) **Identification of Alternatives:** The above two steps - Environmental appraisal and corporate analysis popularly known as SWOT (strengths, weaknesses, opportunities and threats) analysis will help identifying the alternative policies. For example, the objective of the organisation is expansion. This may be achieved by several ways. Diversification of the activities, acquisition of existing organisations, establishment of subsidiaries abroad



and so on. Again, if diversification is chosen, it has to be decided whether it is into related or unrelated business. The alternative policies thus identified have to be evaluated in the light of the organisational mission and objectives.

- (v) **Choice of the right policy:** This stage involves choosing the right policy from among the several policy options that suits the organisational objectives. The Corporate history, personal values and attitudes of the management and the compulsions in the environment, if any, influence the choice of the policy.
- (vi) **Policy Implementation:** Once the policy is decided, necessary steps have to be taken for it's implementation. Effective implementation of the policy requires design of suitable organisational structure, developing and motivating people to contribute their best, design of effective control and information systems, allocation of resources, etc. At times, policies may have to be revised in line with the changes in the environment. To make good any inadequacy at the time of making the policy, or to adapt to the changes in the business environment, policies like plans have to be monitored constantly during the implementation stage.

**Basic Areas of Policy Making:** As mentioned earlier, policies are normally formulated for all the key areas of the business. Some of the important areas for which policies are required are discussed here.

### **Production:**

In the area of production, make or buy decision is an important policy. For instance, automobile companies buy many accessories and parts from outside rather than making those parts themselves. This type of policy enables the organisation to concentrate on the basic product. However, it depends largely on the resources of the organisation and capabilities.

Another important policy pertains to the production run. The volume of output depends on the production run. The demand for the product interims of the orders, costs of tooling, economics of scale are some of the factors that influence the production run. Some companies choose to produce to order, while some companies may produce in anticipation of demand. During slack season, there are companies which produce some fill-in-products to make good use of the facilities. Issues relating to Innovation, new product development and diversification are the other important aspects which require policy direction.

### **Marketing:**

As the business world has become increasingly competitive, marketing has acquired tremendous importance in the recent times. Peter Drucker regards innovation and marketing as the two important functions for every business. The success of any organisation depends on how strong it is in these two basic functions. In the functional area of marketing, answers to certain basic questions help in formulating the policies. The questions include:

- Who are our customers and what do they buy?
- Why do they buy our product?
- What do we offer in relation to our competitors?



- What supporting services do we offer? And
- What is the price to be charged?

Appropriate answers to these questions help in deciding the product, pricing, distribution and promotional policies of the firm. Among these, pricing policy is of utmost significance. Issues relating to how to face the competition are resolved with a sound pricing policy. For instance, whether to indulge in price competition or non-price competition are the two basic issues in this regard. In the former case, the firm meets competition by cutting the prices while in the later, competition is met by promotion, advertising and after sales service, etc. The emphasis is on non-price variables.

### **Finance:**

Financial aspects normally set the limits to the expansion of the business. Necessary steps have to be taken to raise the funds. The required funds for the business may be furnished by the owners or borrowed from outside sources. The actions of management with regard to procurement, utilisation and distribution of funds are guided by the broad policies laid down for the management of funds.

Important policy decision pertains to the proportion of the equity to debt capital. The relative merits and demerits in raising the funds through equity and debt have to be examined. Further, in the case of a going concern, funds may also be raised through retaining a portion of the profits in the business. This in turn influences the dividend policy of the organisation.

Working capital management is another area which requires policy direction. Adequate working capital is essential for any business for maintaining credit and meeting obligations. Policies regarding working capital vary from company to company depending on the size and nature of the business. For instance, public utility concerns with regular cash collection may need less working capital than those engaged in the manufacture of specialised machines. Similarly, a company operating on strictly cash basis requires less working capital than one operating on predominantly credit sales.

Policies relating to the distribution of profits of the business are equally important. This is usually influenced by factors including - the desire of the shareholders, the company's future plans of expansion, availability of other sources of obtaining capital the urgency of the need for additional capital and availability of reinvestible profits. If multinational companies like Hindustan Lever, Brooke Bond, Colgate etc., enjoy tremendous investor clout and emerged as blue chip companies, it is because of investor friendly policies relating to dividends and frequent capitalisation of resources.

### **Personnel:**

Any organisation can be as effective as the people in it. Many problems in the organisations are obviously people related in nature. It is, therefore needless to say that sound personnel polices ensure good employer- employee relations.

Important policies in this area relate to recruitment and training, compensation and other employee benefits and the attitude of the management towards labour unions. All these policies are normally influenced by factors such as skills required at various levels, the attitude of the



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people towards work and the philosophy of the management. On the whole, good employee-oriented personnel policies encompassing the above mentioned issues would contribute to employee motivation and morale.

### **Strategic Planning:**

Presence of buyers' market, emergence of global market, fierce competition, increasing technical complexity, growth and diversification of business, computerisation and automation, greater emphasis on ecology and human resources are the significant reasons accounting for the growing importance and popularity of business planning - Company-wide strategic planning, Strategic business unit planning and Functional annual marketing planning as well as planning at other functional areas.

Systems approach to management demands synthesis, co-ordination and integration of all functional areas of business. Business planning enables management to establish most favourable relations between the organisation, and it's complex as well as dynamic environment. It views a business enterprise as a total integrated system of business operating in a dynamic environment. The major task of managerial leadership is that of integrating all elements of the business and all elements of marketing mix into an effective system that will accomplish marketing objectives and the corporate mission to the mutual benefit of the firm and the society.

Under the marketing concept, i.e., consumer-citizen-oriented marketing approach, business planning centres round marketing planning and marketing strategies. The entire marketing system is designed to serve customer-citizen needs and desires by the companies operating under the marketing concept. Once the needs of customer-citizen become paramount and act as the centre of our marketing universe, business planning in general and marketing planning in particular assume unique importance because customer-citizen needs, wants to desires are dynamic or ever changing. The success of any business will be determined by the evolution and maintenance of the profitable growth balance the resources deployed in the business (inputs) and the customer-citizen needs-satisfaction (output).

Planning is deciding in advance what to do, how to do it, when to do it and who is to do it. Planning is simply a rational approach to accomplish an objective. It bridges the gap from where we are to where we want to go.

Planning is the first management function to be performed in the process of management. It governs survival, growth and prosperity of any enterprise in a competitive and ever-changing environment. Planning is an analytical thought process with covers: (1) analysis of the situation or environment, (2) assessment of the future opportunities and threats, (3) determination of objectives and goals in the light of the future environmental forces, and (4) selection of the best strategy or the course of action from among the alternative strategies to achieve strategies to achieve the objectives.

Assessment of the future reveals opportunities available to as well as probable threats or risks to be surmounted. On the basis of the adequate knowledge of our strengths and weaknesses as well as the limiting factors particularly with reference to our material resources, we can select the best strategy or course of action to capitalise market opportunities, to meet and overcome risks and uncertainties and to achieve our predetermined objectives and goals. A business enterprise is an open, adaptive and socio-economic system living in a dynamic environment.



Situation analysis reveals the non-controllable and changing factors, e.g., customer needs and wants, customer behaviour, competition, production structure, distribution structure and political economic, social and legal climate (plus internal company bottlenecks). Internal and business environment conditions can point out probable unsatisfied customer needs and wants, viz., marketing opportunities as well as marketing problems, e.g., competition, changing buyer behaviour and life-styles. A wise manager looks within, around and ahead before he decides to take action or leap in the competitive and dynamic market. Human resource has almost unlimited potential power; self-managed and self-motivated team members under right leadership can bring out this potential and can achieve unique performance even with other available material resources.

Strategic planning or strategy formulation consists of a set of decisions which leads to the development of an effective strategy. Strategy formulation presupposes environmental analysis and evaluation of internal capabilities. The matching of external threats and opportunities with strategic advantage factors by SWOT analysis provides the necessary informational backdrop to the strategic planner. The next important stage in the process is the generation of possible alternative strategies or identifying strategic options and evaluation of the pros and cons of the various alternatives so as to choose the most appropriate alternative. Strategy formulation is ultimately a responsibility of top management and the Board of Directors. But collection and collation of data and summarising the detailed information are necessary prerequisites for which responsibility lies with the staff specialists.

A comprehensive and analytical process of strategy-making may be explained by distinguishing between three phases of the process: Intelligence, Design and Choice. Intelligence activity involves environmental analysis and diagnosis so as to identify problems to be solved and opportunities worth availing of. It sets the stage for strategic decisions. Design activity comprises search for alternatives and evaluation of the consequences of different alternatives. The search for alternatives is necessarily based on the informational input provided by the intelligence activity. Choice activity consists of selecting the most appropriate strategy from among the alternatives. This framework is helpful in understanding the essential elements involved in strategy formulation. But the sequence of intelligence, design and choice activity may not be practiced in the same order. It is possible for a strategic planner to first choose a preferred strategy, and then develop other options (alternatives) to analyse for rationalising the choice.

### **Strategic Planning at the Corporate Level:**

Corporate strategy or strategy formulation at the corporate level is a systematic and disciplined exercise undertaken by top management for the company as a whole on a continuous basis. It is aimed at making entrepreneurial (risk taking) decisions with the best possible knowledge of their probable outcomes and effects.

The characteristics of corporate strategy which are worth noting arise out of the nature of decisions which form the basis.

*First and foremost*, it is an entrepreneurial function related to the total enterprise or a large segment of it. It may have implications throughout the organisation, e.g., a major change in the scope or direction of business activities of a company.

*Secondly*, corporate strategy involves a long-term perspective. The decisions are futuristic in



the sense of having long-term implications. The firm is committed for an extended period of time ahead.

*Thirdly*, corporate strategy aims at using critical resources towards anticipated opportunities in a changing environment. Very often, the decisions imply a projection of relations with the company's suppliers, customers and the society.

*Fourthly*, it is an intellectual process which involves identification of opportunities and analysis of data and information before choosing the appropriate strategy.

*Fifthly*, corporate strategy is not a one-time exercise. It is a continuous process of revising policies as changes occur in capabilities, resources and the environment.

However, corporate strategy formulation is an unstructured, irregular process as it comes up only when changes take place either in economic, social and political environment, or in the corporate resource position. Problems, opportunities and ideas cannot be expected to arise according to any set timetable. It is thus said to be a game plan.

Strategic planning enables leaders to manage change by focussing on an ideal vision of what the organisation should and could be in the coming five to ten years.

Strategy is a plan that integrates an organisation's major goals, policies and action sequences into a cohesive whole.

### Strategic Planning Process:

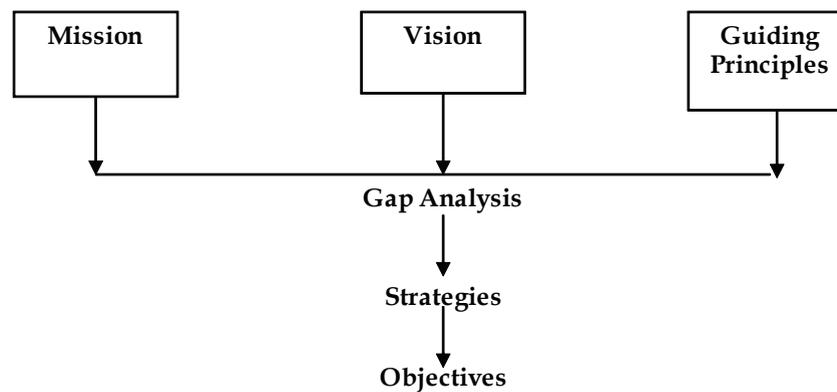


Fig. Strategic Planning Process

### Steps to Strategic Planning:

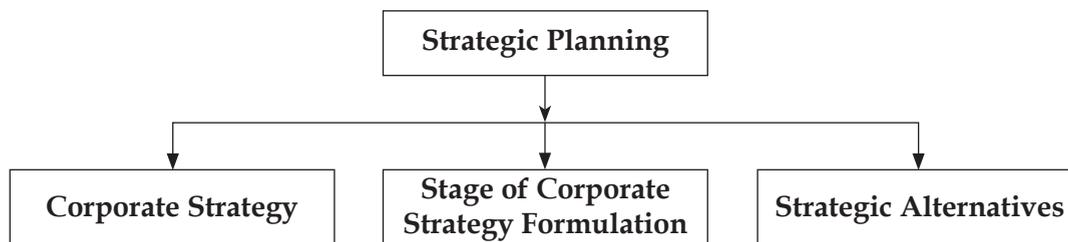
The various steps to strategic planning are-

1. **Customer Need.** Find out the future needs of the customer. What are the requirements. How the organisation meets and exceeds expectations?
2. **Customer Positioning.** Determine where your organisation is in relation to customer. Do you want to retain, reduce or expand the customer network?
3. **Predict the Future.** Demographics, economic forecasts, technical assessments need to be carefully analysed to predict the future conditions that affect your product.



4. **Gap Analysis.** Find out the gaps between the current state & future state of your organisation.
5. **Closing the Gap.** Develop the plan to close the gap by establishing goals & responsibilities.
6. **Alignment.** Align the plan with mission, vision and core values & concept of your organisation.
7. **Implementation.** Allocate the resources to collect data, designing changes and overcoming resistance to change. The planning group or committee should meet at least once a year to assess and take any corrective action needed.
8. **Strategic planning or strategy formulation** is the key steps of strategic management. The planned or formulated strategy is implemented to achieve desired objectives.

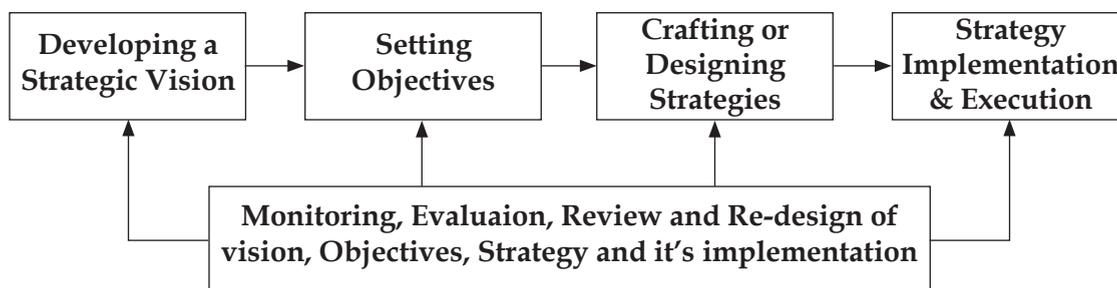
Planning of and strategy leads to strategy formulation.



### Business Policy Planning

#### Process of Strategic Planning and Implementation:

Formulation and implementation of corporate strategy involve steps to be taken by top management at various stages in the process. Stage-wise decision making may be analytically listed as follows:



1. **Developing a strategic vision.** Underlying the strategic vision is the direction-setting idea, a road map of the company's future. It is also a mental perception of the kind of environment that an organisation aspires to create with a broad time frame. This is a top management function because strategic planning pre-supposes the necessity to look forward beyond today and tomorrow.
2. **Defining the business-mission and purpose.** Corporate mission is expected to indicate the basic thrust of the firm-it's products, business and markets. This involves choice from



among alternative futures on the basis of awareness of a sense of purpose, the competitive environment, and matching of the firm's capabilities and opportunities in the environment. Expression of a firm's intent is akin to the mission statement insofar as it is linked with the strategic objectives to be achieved over a long period that is ambitious as well as aggressive.

3. **Setting objectives.** Objectives are time-bound targets decided to be achieved which also serve as standard for measuring the firm's performance.
4. **Crafting a strategy to achieve the objectives and vision.** The strategising process generally originates from the corporate level to the business level and then from the business level to the functional and operating levels.

Middle-level and frontline managers cannot do good strategy making without understanding the company's long-term direction and higher-level strategies. Goods communication of strategic themes and guiding principles serves a valuable strategy making purpose. Developing a strategic vision, setting objectives, and crafting a strategy are basic direction setting tasks.

1. Organisational strengths & weaknesses
2. Competitor's strengths & weaknesses
3. The customers & their needs and the market & the market environment.
4. Implementing & executing the strategy. To convert strategic plans into actions and results, a manager must be able to direct organisational change motivate people build & strengthen company competencies and competitive capabilities, create a strategy-supportive work climate and meet or beat performance targets.
5. Monitoring developments, evaluating performance and making corrective adjustments. A company's vision, objectives, strategy, and approach to strategy execution are never final. Evaluating the company's progress, assessing the impact of new external developments, and making corrective adjustments are continuous method. Whenever a company encounters changes in its external environment, questions need to be raised about the correctness of its direction and strategy, it is to be expected that a company will modify its strategic vision, direction, objectives, and strategy over time.

The terms corporate planning, long-range planning and strategic planning are used synonymously by many authors. Strategic planning has its origin in military organisations where such planning envisaged a variety of contingencies that may arise when large forces move into operation. When viewed in this backdrop, strategic planning in a business organisation envisages a comprehensive study of the various external and internal parameters that affect a company in charting a course of action to achieve the goals.

George Steiner has defined strategic planning as "the process of determining the major objectives of an organisation and the policies and strategies that will govern the acquisition, use and disposition of resources to achieve those objectives". Strategic plans reflect the socio-economic purpose of the organisation and the values and philosophy of the top management. In simple, they relate the organisation to the environment in which it operates by providing answers to the basic questions like:

- Where are we now?
- Where do we want to go? and
- Why do we want to go?



They help the management in:

- coping effectively with future contingencies.
- providing an early opportunity to correct mistakes.
- making decisions about the right things at the right time and
- Understanding what actions to take in order to shape the future as desired.

### Strategy:

Strategy is very popular word used in military related to war, as used means or methods to defy or defeat enemy. Strategy is now as popular word in business as in military, but in businesses, strategy is related to methods or means adopted to achieve business's objectives.

In business, 'Strategy' is considered as:

- a game plan by management to take position, conduct operation, attract customers and compete successfully;
- a comprehensive, unified or integrated plan and actions to achieve the desired business goals and objectives;
- a long term plan or blue print to achieve desired image, direction and destination for organisation;
- an analysis, planning and implementation of actions or activities to take successfully organisation out from any adverse scenario and put organisation in the league of winners; and
- a plan adopted for survival, stability and growth of business

Followings are some general characteristics of a 'Corporate Strategy'

- Formulated by Top Management
- Long Term or Long Range: It is meant for long term future growth and profits
- Integrated: Consider all elements of business
- Flexible: Can be modified as per changed Environment
- Action Oriented: It should not be planning only, it should be action oriented planning
- Goal Oriented: It is for achieving organisation long term objectives of growth, profitability and sustainability
- Purposeful: It is for making organisation ready to cope-up to a competitive and complex business environment successfully
- Efficient: it does not include unnecessary activities and elements
- Synchronised: All activities of strategy are well coordinated

**Business Strategy:** Business strategy consists of the decisions made by top management and the resulting actions taken to achieve the objectives set for the business. The major strategy components and several key issues related to each component. The issues highlight important questions that management must answer in charting the course of the enterprise. Management's



skills and vision in addressing these issues are critical to the performance of the corporation. Essential to corporate success is matching the competitive advantage of the organisation with opportunities to achieve long-term customer satisfaction.

### Corporate Strategy Components and Issues

Strategy Component	Key Issues
Scope, mission, and intent	<ul style="list-style-type: none"><li>➤ What business (es) should the firm be in?</li><li>➤ What customer needs, market segments, and/or technologies should be focused on?</li><li>➤ What is the firm's enduring strategic purpose or intent?</li></ul>
Objectives	<ul style="list-style-type: none"><li>➤ What performance dimensions should the firm's business units and employees focus on?</li><li>➤ What is the target level of performance to be achieved on each dimension?</li><li>➤ What is the time frame in which each target should be attained?</li></ul>
Development strategy	<ul style="list-style-type: none"><li>➤ How can the firm achieve a desired level of growth over time?</li><li>➤ Can the desired growth be attained by expanding the firm's current businesses?</li><li>➤ Will the company have to diversify into new businesses or product-markets to achieve its future growth objectives?</li></ul>
Resource allocation	<ul style="list-style-type: none"><li>➤ How should the firms' limited financial resources be allocated across its businesses to produce the highest returns?</li><li>➤ Of the alternative strategies that each business might pursue, which will produce the greatest returns for the dollars invested?</li></ul>
Sources of synergy	<ul style="list-style-type: none"><li>➤ What competencies, knowledge, and customer-based intangibles (e.g., brand recognition, reputation) might be developed and shared across the firm's businesses?</li><li>➤ What operational resources, facilities, or functions (e.g., plants, R&amp;D, salesforce) might the firm's businesses share to increase their efficiency?</li></ul>

Top management sets the guidelines for long-term strategic planning of the corporation. In a business that has two or more strategic business units, decisions must be made at two levels. Corporate management must first decide what business areas to pursue and set priorities for allocating resources to each SBU. The decision makers for each SBU must select the strategies for implementing the corporate strategy and producing the results that corporate management expects. Corporate-level management should assist SBUs in achieving their objectives.

Corporate strategy and resources should help an SBU to compete more effectively than if the unit operates on a completely independent basis. "To remain competitive, corporations must provide their business units with low-cost capital, outstanding executives, corporate R&D, centralised marketing where appropriate and other resources in the corporate arsenal. Corporate resources and synergies help the SBU establish its competitive advantage. The strategic



focus and priorities of corporate strategy guide SBU strategies. Finally, top management's expectations for the corporation indicate the results expected from an SBU, including both financial and nonfinancial objectives. When viewed in this context, the SBUs become the action centers of the corporation.

### Answering Basic Questions to Develop Strategy:

If a strategy says so much about a firm, what key questions must managers answer to develop one? Following Table summarises these questions:

**Table: Some Key Questions in Strategy Development**

1	What good or service do we really sell?
2	How will we produce our goods or deliver our services?
3	Who will buy our goods or services?
4	How will we finance the operation?
5	How much risk are we willing to take?
6	How will we implement our strategy?

**First**, developing a strategy forces the manager to focus on the very basic question about the business in which the firm really competes, or would like to compete. What good or service do we really sell? What do we, as a firm, do best? For example, does an athletic shoe company sell high performance or style?

**Second**, how will we produce our goods or deliver our services? For example, in our industry at this point in time, can we succeed with an upscale entry or would a stripped-down, low-cost version be more successful? Answering these first two questions forces managers to look carefully at their core competencies, which, in turn, shape product characteristics as well as manufacturing requirements.

**Third**, who will buy our goods or services? This brings the customer and the existing industry structure squarely into the middle of the strategy equation. An answer to this question requires industry and competitor analyses, marketing research, and distribution channel and logistics analyses.

**Fourth**, how we will finance the operation? A new strategy can be quite costly, as the firm gears up to design new products, enter new channels, challenge competitors in new market segments, purchase new manufacturing equipment, hire new workers, etc. Finding the funds to implement a new strategy is not a trivial concern.

**The fifth question** is closely related to the fourth. How much risk are we willing to take? A new strategy may require management to bet the business on it's success. If the strategy is a winner, the firm wins; if it fails, the firm collapses. These risk assessments are often among the most difficult judgments that business leaders make. The first five questions are all concerned with analysis and judgment to define a strategy for an organisation. The sixth question asks how we will implement our strategy. How will we revise it along the way. What changes in structure, systems, or staffing will we need to make to improve an intended strategy's chance to succeed?



The complexity and sophistication of business decision making requires strategic management. In particular, strategic management offers both financial as well as non-financial benefits to an organisation. Firms expect and reap financial benefits if they adopt strategic management.

In addition to a healthy bottom-line, strategic management contributes to behaviourally based effects on a company. Such behavioural effects that can be expected are:

1. Strategy formulation activities should enhance the problem prevention capabilities of the firm. As a consequence of encouraging and rewarding subordinate attention to planning considerations, managers are aided in their monitoring and forecasting responsibilities by workers who are alerted to the needs of strategic planning.
2. Group-based strategic decisions are most likely to reflect the best available alternatives. Better decisions are possible outcomes of the process for two reasons. First, generating alternative strategies is facilitated by group interaction, Second, screening of options is improved because group members offer forecasts based on their specialised perspectives.
3. Employee motivation should improve as employees better appreciate the productivity reward relationships inherent in every strategic plan. When employees or their representatives participate in strategy formulation process, a better understanding of the priorities and operations of the organisation's reward system is achieved, thus adding incentives for goal directed behaviour.
4. Gaps and overlaps in activities among diverse individuals and groups should be reduced as participation in strategy formulation process, promotes an understanding of the delineations of individual and subgroup responsibilities.
5. Resistance to change should be reduced. The required participation helps eliminate the uncertainty associated with change, which is at the root of most resistance. While participants may no more be pleased with their own choices than they would be with authoritarian decisions, their acceptance of new plans is more likely if employees are aware of the parameters that limit the available options.

### **Requisites of an Effective strategy:**

The major assumptions relating to an effective strategy are as follows:

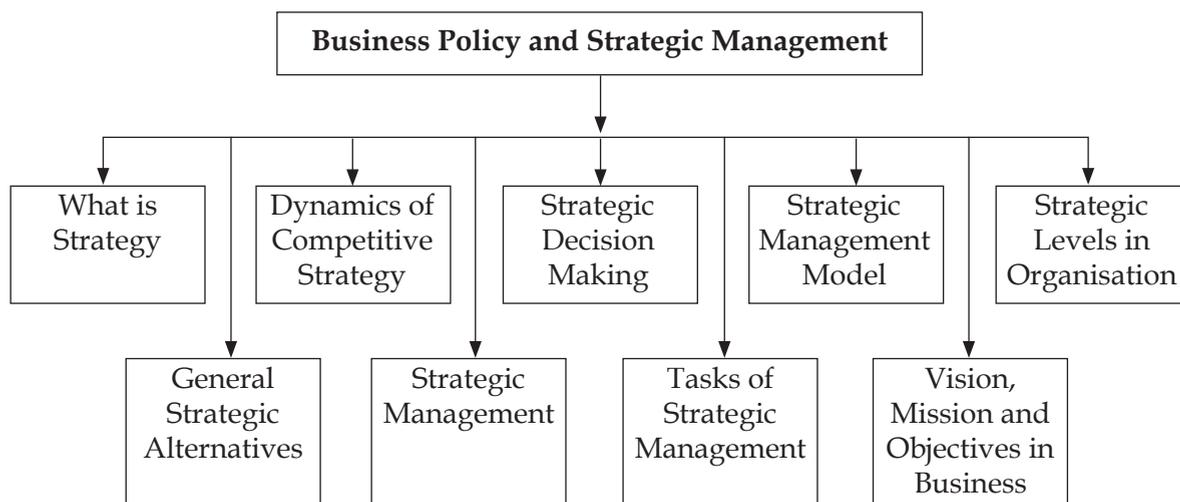
1. Strategy will be suitable only if it is environmental friendly and uses the least of non-renewable sources. Any strategy based on this assumption is more likely to succeed.
2. With the globalisation of business, organisation needs to bring out more varieties of products and services to suit customer needs. This requires a flexible and cost effective manufacturing, distribution and sourcing strategies. Therefore, a sustainable strategy has to be flexible and cost effective.
3. With the lowering of technology barriers, product life cycles are crashing. Therefore, being responsive to the global customers will help a firm outperform others. Therefore, strategies have to be necessarily more responsive with the least time lag.
4. In the dynamic global business situation, current organisation structures can't offer the necessary flexibility & responsiveness to counter modern challenges. Therefore, strategies need to be evolved wherein radically different organisation structures, preferably smaller ones need to be created.



- Strategies based on products and services of international standards and open architecture are more likely to succeed since in the coming years, the competition will not be between the products but between the standards. Examples are DOS vs. UNIX operating system of computers. Standards are constantly redefining the industry position and hence the right assumption will lead to a more sustainable strategy.

### Strategic Management:

The term strategic management refers to the process of forming a vision, setting objectives, building a strategy, implementing and executing the strategy and then initiating whatever corrective adjustments required in the vision, objectives and strategy, etc to achieve the objectives.



The term 'strategic management' is combination of strategy + management. This term refers to the forming a strategic vision, setting objectives, developing a strategy, implementing and executing the strategy, and then overtimes initiating whatever adjustments are required in the vision and objectives then implementing these adjustments.

Strategic management initiate with setting a mission, objectives and goals. Thereafter building a business portfolio (business model/product mix) accordingly and carrying the functional activities to achieve the set mission, objectives and goals.

Strategy and Strategic management are concepts that evolve over time. These ideas defy universally accepted definitions because scholars develop them and managers practice them in diverse ways. This lack of consensus, however, does not keep most contemporary organisations from trying to reap the benefits of strategic management by developing innovative strategies to out-maneuver their competitors.

Strategic management is a continuous, iterative, cross-functional process aimed at keeping an organisation as a whole appropriately matched to it's environment. This definition emphasises the series of steps that a manager must take. These steps, which we will discuss individually in the following pages, include performing an environmental analysis, establishing organisational direction, formulating organisational strategy, implementing organisational strategy, and



exercising strategic control. Additional information on each of these steps will appear throughout this text.

The definition also suggests that the strategic management process is continuous; the organisation never finishes its strategic work. Although different strategic management activities may receive more or less emphasis and require effort of varying intensity at different times, managers should virtually always be focusing or reflecting on some aspect of strategic management. The term iterative in the definition reinforces this idea. The process of strategic management starts with the first step, carries on to the last step, and then begins again with the first step. Strategic management consists of a series of steps repeated cyclically.

The term cross-functional signifies that the strategic management process integrates organisational human resources and expertise from critical functions such as marketing, operations, and finance in a comprehensive effort. This helps the process, and the plan it generates, to deal more effectively with potential conflicts in recommendations of individual functions operating in isolation.

A cross-functional approach allows no one, not marketing nor manufacturing nor finance, to control or dominate the process; each contributes simultaneously to create a better plan and result. Working as a cross-functional team, members of the management group can more clearly visualise the overall picture of where the firm is and what it needs to do in the future to achieve a sustainable competitive advantage. This method can encourage commitment of key executives to a strategic plan.

The last part of the definition of strategic management identifies its purpose as ensuring that an organisation as a whole appropriately matches its environment, that is, its competitive surroundings. Business environments change constantly, and organisations must modify their strategies accordingly to achieve organisational goals. New legislation may affect the organisation, its labour supply may change, and competitors may launch new initiatives. These are examples of changes within the organisation's environment that often require the attention of top managers.

Although the definition of strategic management seems clear and straightforward, actually performing the task is not. Carrying out this process in an organisation usually becomes a very complex job that consumes much top management time. Increasingly, the involvement of managers and employees has spread throughout organisations.

### **Benefits of Strategic Management:**

An organisation can reap several benefits from effective strategic management. Perhaps the most important benefit is higher profit. Although past studies have concluded that strategic management does not always increase profitability, a significant number of recent investigations have suggested that a well-designed strategic management system can boost profits.

In addition to financial benefits, organisations may gain other advantages by implementing strategic management programs. For example, strategic management can strengthen organisation members' commitment to attaining long-term goals. Increased commitment normally accompanies participation in setting goals and strategies for reaching those goals. In addition, when strategic managers emphasise assessing the organisation's environment, the



organisation reduces the chance of being surprised by movements within the marketplace or by actions of competitors that could put the organisation at a sudden disadvantage. These potential benefits also explain the increased popularity of strategic management with not-for-profit and public sector organisations.

Of course, an organisation cannot guarantee these benefits just by completing a strategic management exercise. As in most important areas of organisational life, success is never automatic and every effort risks failure. An organisation's strategic management process may have inherent flaws (e.g., its environmental analysis may be incomplete). Even an organisation with a refined, long-standing, highly regarded strategic management system may suffer disappointing results from decisions based on erroneous economic or market forecasts. Several large computer hardware firms such as IBM or Digital Equipment have learned this hard lesson.

### Strategic Management Framework:

The basic framework of strategic management involves five stages:

**Stage 1:** In this stage, organisation analyse about their present situation in terms of their Strengths, Weaknesses, Opportunities and Threats.

**Stage 2:** In this stage, organisations setup their missions, goals and objectives by analysing where they want to go in future.

**Stage 3:** In this stage organisation analyses various strategic alternatives to achieve their goals and objectives. The alternatives are analysed in terms of what business portfolio/product mix to adopt, expansion, merger, acquisition and divestment options etc are analysed to achieve the goals.

**Stage 4:** In this organisations select the best suitable alternatives in line with their SWOT analysis.

**Stage 5:** This is implementation stage in which organisation implement and execute the selected alternatives to achieve their strategic goals and objectives.

Stage 1: Where are we now? Analysis of present situation

Stage 2: Where we want to go? Setting goals and objectives for future

Stage 3: Analyses of various alternatives to achieve the goals and objectives

Stage 4: Selecting best alternatives in line with strengths of organisation

Stage 5: Implementing and executing the selected alternatives and monitoring of the same overtimes

### Strategic Management Framework



## Importance of Strategic Management:

- Discover organisation strengths and weaknesses
- Identify the available opportunities and possible threats
- Discover the objectives and goals in line with organisations strengths and available opportunities
- Implement changes to overcome weaknesses and manage the threats.
- Provide vision/mission or direction to future of organisations
- Build a dynamic and strong organisation
- Help to achieve growing and stable organisation

## Strategic Management Process:

### 1. Introduction

Strategic management is a process or series of steps.

The basic steps of the strategic management process are (presented in figure)

- a. identifying or defining business mission, purpose and objectives,
- b. environmental (including global) analysis to identify present and future opportunities and threats,
- c. organisational analysis to assess the strengths and weaknesses of the firm,
- d. developing alternative strategies and choosing the best strategy,
- e. strategy implementation, and
- f. strategic evaluation and control.

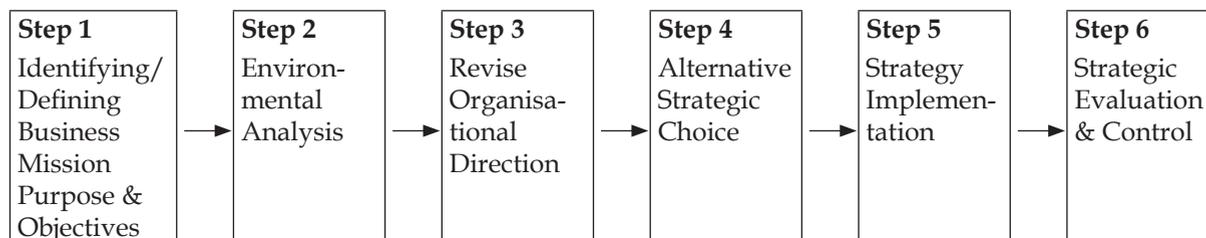


Fig. Major Steps in Strategic Management Process

### Steps of Strategic Management Process:

**Step 1: Identifying Defining Business Mission, Purpose and Objectives:** Identifying or defining an organisation's existing mission, purpose and objectives is the logical starting point as they lay foundation for strategic management. Every organisation has a mission, purpose and objectives, even if these elements are not consciously designed, written & communicated. These elements relate the organisation with the society and states that it has to achieve for itself and to the society.

**Step 2: Environmental Analysis:** Environmental factors – both internal environment and external environment – are analysed to:

- i. identify changes in the environment,
- ii. identify present and future threats and opportunities, and
- iii. assess critically it's own strengths and weaknesses.



Organisational environment encompasses all factors both inside and outside the organisation that can influence the organisation positively and negatively. Environmental factors may help in building a sustainable competitive advantage.

**Step 3: Revise Organisational Direction:** A thorough analysis of organisation’s environment pinpoints it’s strengths, weaknesses, opportunities and threats (SWOT). This can often help management to reaffirm or revise it’s organisational direction.

**Step 4: Strategic Alternatives and Choice:** Many alternative strategies are formulated based on possible options and in the light of organisational analysis and environmental appraisal. Alternative strategies will be ranked based on the SWOT analysis. The best strategy out of the alternatives will be chosen.

The steps from identification of business mission, purpose and objectives of alternative strategies and choice can be grouped into the broad step of strategy formulation.

**Step 5: Strategy Implementation:** The fifth step of strategic management process is the implementation of strategy. The logically developed strategy is to be put into action. The organisation can not reap the benefits of strategic management, unless the strategy is effectively implemented.

The managers should have clear vision and idea about the competitor’s strategy, organisation’s culture, handling change, skills of the managers-in-charge of implementation and the like. The progress from the stage of identification of business mission, purpose and objectives to the stage of achieving desired performance must overcome many obstacles.

**Step 6: Strategic Evaluation and Control:** The final step of strategic management process is strategic evaluation and control. It focuses on monitoring and evaluating the strategic management process in order to improve it and ensure that it functions properly. The managers must understand the process of strategic control and the role of strategic audit to perform the task of control successfully.

Strategic management process is presented as a series of discrete steps for the purpose of simplicity in the learning process. But, managers find that an organisation’s strategic management effort requires that they perform several steps simultaneously and/or perform them in different order as presented in Figure below:

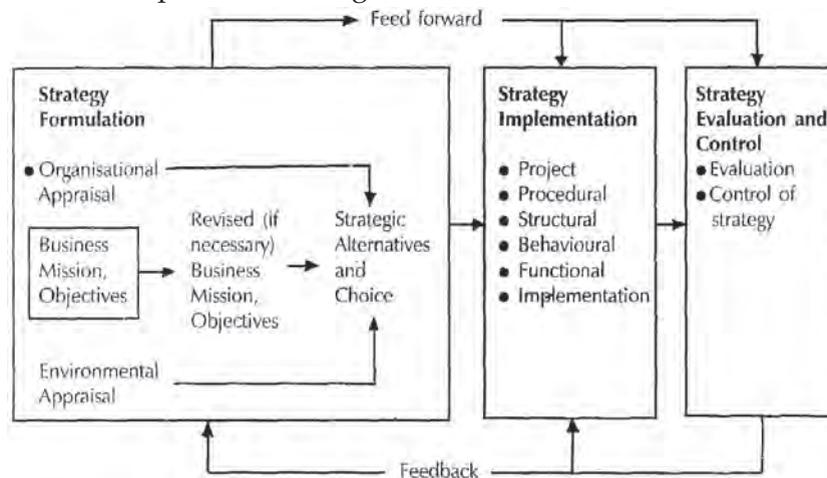


Fig.: Strategic Management Process Model



## **Vision:**

Vision is a statement of the future. It articulates the basic characteristic that shape organisations strategy. It indicates where the organisation is headed and what it intends to be.

## **Vision, Mission and Objectives in Business:**

'Strategy Formulation' i.e. developing vision, mission, objectives and goals is the most important step of strategic management model. This step is considered as a path forming step, and provides the direction to organisation for movement in future.

**Vision:** There is a quote that 'great visionary can foresee the future in advance and take steps accordingly to be at forefront'

So, we can conclude that;

1. Vision provide a road map to Company's future.
2. Vision indicates the kind of company management is trying to create for future.
3. Vision specifies about company intention and capabilities to adapt to new technologies.
4. Vision also specifies management policies towards customers and societies.

Strategic vision specifies primarily three elements:

1. Forming a mission statement that defines what business the company presently is in? And "who we are and where we are now?"
2. Using this mission statement as base to define long term path by indicating choices about "Where we are going?"
3. Finally, communicating above strategic vision in clear and committed term.

Strategic Vision has important purposes, such as:

1. Clearly provide the direction that company wants to follow.
2. Identify the need of changing from existing direction or products, if stated in vision statement.
3. Create passionate environment in the organisation to steer the company with great excitement in selected direction.
4. Create creativity in every member of company to prepare company for future.
5. Promote entrepreneurship.

## **Meaning and Use of Mission:**

The term 'mission' implies the fundamental and enduring objectives of an organisation that set it apart from other organisations of similar nature. The mission is a general enduring statement of instruction of an organisation. The corporate mission is the purpose or reason for it's existence. It refers the philosophy of business to the static decision maker to build the image of the company. The corporate mission highlights the organisation self-concept and indicates



the nature of product or service to be offered or rendered for fulfillment of the requirements of the customers as also for the community and society as a whole.

The mission may, as such, be described as the scope of operations in terms of product, market or the service as well as customers and clients. An organisation may define its mission highlighting the philosophy and purpose. The philosophy establishes the values, beliefs and guidelines for the business plan and business operation.

The mission of a firm defines its reasons for existence.

**Mission includes:**

- A definition of products and services the organisation provides.
- Technology used to provide these products and services.
- Types of markets.
- Customer need or requirement.
- Distinctive Competencies.

**Organisational Mission and Objectives:** In one way, objective setting is the starting point of strategy formulation. Organisations, being deliberate and purposive creations, have some objectives. The ends for which they strive are referred to as 'mission,' 'purpose,' 'objective,' 'goal,' or 'target'. Though there are differences in these terms, often the differences are not emphasised and these terms are used interchangeably in practice to denote the end results for which organisations strive. However, the end results of organisations, or their parts, can be defined in various ways. For example, these can be defined in quantitative terms to be achieved in specific time or may be defined in some general terms without reference to any time period. In these two cases, the end results have been expressed, however, the emphasis is different. Thus some distinction can be made in these terms.

**Purpose and Mission:** An organisation's purpose and mission consist of a long-term vision of what it seeks to do and the reasons why it exists. Purpose is management's concept of the organisation and its service mission to society. An organisation's purpose, when expressed in managerially meaningful terms, indicates exactly what activities the organisation intends to engage in now and in future. It suggests something specific about what kind of organisation it is and is to become. It depicts the organisation's business character and does so in ways that tend to distinguish the organisation from other organisations. Thus purpose and mission can be defined as follows:

The purpose and mission of an organisation is a general enduring statement of the organisation the intent of which embodies the decision maker's business philosophy; it implies the image which the organisation seeks to project.

In this sense, purpose sets forth principles and conceptual foundation upon which the organisation rests and the nature of the business in which it plans to participate. Organisational mission, defined properly, offers guidance to managers in developing sharply focused, result-oriented objectives, strategies, and policies. Therefore, a detailed understanding of organisational mission is the starting point for rational managerial action and for the design of organisation structure, processes, and procedures. Managerial effectiveness tends to begin with clarity of



mission with an accurate, carefully delineated concept of just what the organisation is trying to do and why.

A key feature of organisation's purpose is that its focus must be external rather than internal. For example, Drucker has the following suggestion: 'To know what a business we have to start with is its purpose. Its purpose must lie outside the business itself. In fact, it must lie in society since business enterprise is an organ of society. There is only one valid definition of business purpose to create a customer.

## **Defining the Company Mission:**

### **What is a Company Mission?**

The mission is a broadly framed but enduring statement of company intent. It embodies the business philosophy of strategic decision makers; implies the image the company seeks to project; reflects the firm's self-concept; indicates the principal product or service areas and primary customer needs the company will attempt to satisfy. In short, the mission describes the product, market, and technological areas of emphasis for the business. And it does so in a way that reflects the values and priorities of strategic decision makers.

The mission of a business is the fundamental, unique purpose that sets it apart from other firms of its type and identifies the scope of its operations in product and market terms. The mission is a general, enduring statement of company intent. It embodies the business philosophy of strategic decision makers, implies the image the company seeks to project, reflects the firm's self-concept, and indicates the principal product or service areas and primary customer needs the company will attempt to satisfy. In short, the mission describes the product, market, and technological areas of emphasis for the business in a way that reflects the values and priorities of the strategic decision makers.

## **The Need for an Explicit Mission:**

Defining the company mission is time consuming, tedious, and not required by any external body. The mission contains few specific directives, only broadly outlined or implied objectives and strategies. Characteristically, it is a statement of attitude, outlook, and orientation rather than of details and measurable targets.

What then is a company mission designed to accomplish?

1. To ensure unanimity of purpose within the organisation.
2. To provide a basis for motivating the use of the organisation's resources.
3. To develop a basis, or standard, for allocating organisational resources.
4. To establish a general tone or organisational climate, for example, to suggest a businesslike operation.
5. To serve as a focal point for those who can identify with the organisation's purpose and direction, and to deter those who cannot from participating further in the organisation's activities.
6. To facilitate the translation of objectives and goals into a work structure involving the assignment of tasks to responsible elements within the organisation.



7. To specify organisational purposes and the translation of these purposes into goals in such a way that cost, time, and performance parameters can be assessed and controlled.

### Formulation of Organisational Mission:

Organisation can not declare the mission just on some great whim and fancy, it should be based on organisations' existing capabilities and achievable milestones. Here are some guidelines for formulation of "mission" statement

- It should be based on existing business capabilities "Who we are and what we do?"
- It should follow the long term strategy principles
- Profit making should not be the only mission of organisation
- It should be logical extension of business existing capabilities
- It should clearly and precisely present the future orientation of business
- It should includes achievable missions
- It should be stated in a form that it becomes the motivating force to every member of organisation
- Mission statement once formed shall be communicated to every member of organisations
- It should include interest of customers and society

Organisational mission encompasses the broad aims of the organisation; it defines what for the organisation strives. Therefore, the process of defining the mission for any specific organisation can be best understood by thinking about it at it's inception. An organisation begins with the beliefs, desires, and assumptions of single entrepreneur. These beliefs, desires and assumptions may be of the following nature:

1. The product and service offered by the organisation can provide benefits at least equal to it's price.
2. The product or service can satisfy the needs of the customers not adequately served by others presently.
3. Technology used in producing product or service will be cost and quality competitive,
4. The organisation can grow and be profitable than just survive in the long run with the support of various constituents.
5. The organisation will create favourable public image which will result in contributions from the environment.
6. Entrepreneur's self-concept of the business can be communicated and adopted by employees and stakeholders.
7. The organisation will be able to satisfy the entrepreneur's needs and aspirations which he seeks to satisfy through the organisation.

At the initial stage, the above elements go into mission formulation. As the organisation grows or is forced by competitive forces to alter it's product, market, and technology, there may be need for redefinition of the mission. However, the revised mission will reflect the same set of elements as the original – like type of product to be offered, type of customer to be served, type



of technology to be employed, growth of organisation, favourable public image, self-concept of entrepreneur, and needs and aspirations of entrepreneur, though in modified form.

### **Objectives, Goals and Targets:**

We frequently use the term organisation's "objectives and goals", the term "objective and goals" set target of any particular aspect like profit and revenue growth, etc.

Here are some common definitions of Objectives;

- Objectives are performance targets which organisations wants as result or outcomes in the specified periods
- Objectives achievements are used as benchmark of organisation performance and success
- Objectives are formed from visions and mission statement of organisations
- Objectives are interchangeably used with goals but goals are defined as more precise and specific with closed ended attribute (in precise quantity form) whereas objectives are open ended for future states or outcome not as precise as goals. Objectives are for long term whereas goals are for short term

Characteristics of Objectives: Objectives characterise business long-term prospective, such as:

- Facilitate to achieve mission and goals
- Set the basis for strategic decision making
- Clear the relationship of organisation with environment
- Should be understandable by each member of organisation
- Should be measurable and controllable
- Should be related to time frame
- Should be challenging
- Should be concrete and specific
- Should be formed within the constraints
- Should motivate people.

### **Formal strategies contain three elements:**

1. Goals to be achieved.
2. Policies that guide or limit action.
3. Action sequences or programs that accomplish goal.

Effective strategic revolve around the key concepts or thrust area such as customer satisfaction or customer focus.

### **Concept of Strategic Intent:**

Here intent refers to intension. A company exhibits strategic intent when it relentlessly (aggressively) pursues an ambitious strategic objective and concentrates it's full resources and competitive actions on achieving that objective.



A company's strategic intent can help in many ways to the company, like:

- in becoming the dominant company in the industry;
- unseating the existing industry leader;
- delivering the best customer service in the industry (or the world);
- turning new technology into products which are capable of changing the way people work and live.

Innovations that make their production systems unexpectedly obsolete (technological).

**Objectives and Goals:** The literature of management is filled with references to objectives and goals. These terms are used in a variety of ways, many of them conflicting. First, these terms are used interchangeably meaning one and the same thing. Therefore, there is no difference between the two. To make distinction between long-term and short-term orientations, these prefixes are used either with objectives or goals. Second, some authors use goals as the long-term results which an organisation seeks to achieve and objectives as the short-term results. Third, some writers reverse the usage referring to objectives as the desired long-term results and goals as the desired short-term results. This latter view is, however, more prevalent. From this point of view, Ackoff has defined both the terms as follows:

'Desired states or outcomes are objectives. Goals are objectives that are scheduled for attainment during planned period'. Thus objectives and goals defined in this way convey two different concepts.

The distinction between these two concepts is important because strategic management needs both. The difference between objectives and goals may be drawn in terms of the following four dimensions.

1. **Time Frame.** Objectives are timeless, enduring, and unending; goals are temporal, time-phased, and intended to be superseded by subsequent goals. Because objectives relate to the ongoing activities of an organisation, their achievement tends to be open-ended in the sense of not being bounded by time. For example, the survival objective of a business organisation is never completely attained since failure is always a future possibility.
2. **Specificity.** Objectives are stated in broad, general terms, dealing with matters of image, style, and self-perception. These are aspirations to be worked in the future. Goals are much more specific, stated in terms of a particular result that will be accomplished by a specific date. In the above example, survival as an objective is not very specific because it leads to different interpretations of the state of survival. On the other hand, goals can be expressed in terms of say achievement of 10 per cent growth in the net sales in the next year. This is more specific and time bound.
3. **Focus.** Objectives are usually stated in terms of some relevant environment which is external to the organisation; goals are more internally focused and carry important implications about how resources of the organisation are utilised or will be utilised in the future. Therefore, objectives are more generalised statements like maintaining market leadership, striving continuously for technological superiority, etc. A goal may imply a resource commitment requiring the organisation to use those resources in order to achieve the desired outcomes.



4. **Measurement.** Both objectives and goals can be stated in terms which are quantitatively measured but the character of measurement is different. Generally, quantitative objectives are set in relative terms. For example, Reliance Textiles has put its objectives like this: to acquire top position among the Indian companies. This objective may not be achieved in any one year, but it is timeless and externally focused, providing a continuing challenge for the company. Quantitative goals are expressed in absolute terms. For example, a company has stated its goal to achieve 10 per cent growth in its sales in the next year. The achievement of this goal can be measured irrespective of environmental conditions and competitors' actions.

Thus objectives are more specific as compared to the purpose or mission of the organisation. However, these are expressed in such terms which can be followed continuously. For example, a private sector company has declared as follows:

The main objective of the company is to manufacture and distribute both consumer and industrial products of high quality to our customers in India and abroad at a minimum price which will return a reasonable profit to the company. This company will expand and diversify its activity as necessary to meet the needs of the customers to render better service/to obtain better quality, or to effect economies in operation.

### **Annual Objectives:**

The results an organisation seeks to achieve within a one-year period are annual objectives. Short-term or annual objectives involve areas similar to those entailed in long-term objectives. The differences between them stem principally from the greater specificity possible and necessary in short-term objectives. For example, a long-term objective of increasing companywide sales volume by 20 percent in five years might be translated into a 4 percent growth objective in year one. In addition, it is reasonable that the planning activities of all major functions or divisions of the firm should reflect this company-wide, short-run objective. The research and development department might be expected to suggest one major addition to the product line each year, the finance department might set a complementary objective of obtaining the necessary Rs.3,00,000 in funds for an immediate expansion of production facilities, and the marketing department might establish an objective of reducing turnover of sales representatives by 5 percent per year.

### **Company Goals: Survival, Growth, Profitability**

Three economic goals guide the strategic direction of almost every viable business organisation. Whether or not they are explicitly stated, a company mission statement reflects the firm's intention to secure its survival through sustained growths and profitability.

Unless a firm is able to survive, it will be incapable of satisfying any of its stakeholders' aims. Unfortunately, like growth and profitability, survival is such an assumed goal that it is often neglected as a principal criterion in strategic decision making. When this happens, the firm often focuses on short-term aims at the expense of the long run.

Profitability is the mainstay goal of a business organisation. No matter how it is measured or defined, profit over the long term is the clearest indication of a firm's ability to satisfy the principal claims and desires of employees and stockholders. The key phrase in the sentence



is “over the long term”. Obviously, basing decisions on a short-term concern for profitability would lead to a strategic myopia. A firm might overlook the enduring concerns of customers, suppliers, creditors, ecologists, and regulatory agents. In the short term the results may produce profit, but over time the financial consequences are likely to be detrimental.

The following excerpt from the Hewlett-Packard Company’s statement of corporate objectives (i.e., mission) ably expresses the importance of an orientation toward long-term profit:

To achieve sufficient profit to finance our company growth and to provide the resources we need to achieve our other corporate objectives.

In our economic system, the profit we generate from our operations is the ultimate source of the funds we need to prosper and grow. It is the one absolutely essential measure of our corporate performance over the long term. Only if we continue to meet our profit objective can we achieve our other corporate objectives.

A firm’s growth is inextricably tied to its survival and profitability. In this context, the meaning of growth must be broadly defined. While growth in market share has been shown by the product impact market studies (PIMS) to be correlated with firm profitability, other important forms of growth do exist. For example, growth in the number of markets served, in the variety of products offered, and in the technologies used to provide goods or services frequently leads to improvements in the company’s competitive ability. Growth means change, and proactive change is a necessity in a dynamic business environment. Hewlett-Packard’s mission statement provides an excellent example of corporate regard for growth:

To let our growth be limited only by our profits and our ability to develop and produce technical products that satisfy real customer needs.

We do not believe that large size is important for its own sake; however, for at least two basic reasons continuous growth is essential for us to achieve our other objectives.

In the first place, we serve a rapidly growing and expanding segment of our technological society. To remain static would be to lose ground. We cannot maintain a position of strength and leadership in our field without growth.

In the second place, growth is important in order to attract and hold high-caliber people. These individuals will align their future only with a company that offers them considerable opportunity for personal progress. Opportunities are greater and more challenging in a growing company.

The issue of growth raises a concern about the definition of a company mission. How can a business specify product, market, and technology sufficiently to provide direction without delimiting unanticipated strategic options? How can a company define its mission so opportunistic diversification can be considered while at the same time maintaining parameters that guide growth, decisions? Perhaps such questions are best addressed when firm outlines-Objectives its mission conditions under which it might depart from ongoing operations. The growth philosophy of Dayton-Hudson shows this approach:

The stability and quality of the corporation’s financial performance will be developed through the profitable execution of our existing businesses, as well as through the acquisition or development of new businesses. Our growth priorities, in order, are as follows:



- Development of the profitable market preeminence of existing companies in existing markets through new store development or new strategies within existing stores;
- Expansion of our companies to feasible new markets;
- Acquisition of other retailing companies that are strategically and financially compatible with Dayton-Hudson;
- Internal development of new retailing strategies.

Capital allocations to fund the expansion of existing operating companies will be based on each company's return on investment, in relationship to its return-on-investment (ROD) objective and its consistency in earnings growth, and on its management capability to perform up to forecasts contained in capital requests.

Expansion via acquisition or new venture will occur when the opportunity promises an acceptable rate of long-term growth and profitability, acceptable degree of risk, and compatibility with the corporation's long-term strategy.

### **Corporate Objectives:**

- (i) To attain the market potential in a competitive environment through dedicated customer service and continuously improving the quality levels,
- (ii) To reach the level of competitive price in the country as well as in the international market,
- (iii) To become a leading exporter,
- (iv) To become the largest producer of its products and services,
- (v) To maintain and promote a committed and motivated work force. Based on the above broad corporate objectives, the specific corporate goals are decided.

### **Mission and Strategy:**

Mission sets the direction for the strategic development of the organisation. As Drucker remarks in his *Managing for the Future*, the mission "focuses the organisation on action. It defines the specific strategies needed to attain the crucial goals. It creates a disciplined organisation. It alone can prevent the most common degenerative disease of organisations, especially large ones, splintering their always limited resources on things that are 'interesting' or look 'profitable' rather than concentrating them on a very small number of productive efforts". There are several examples of organisations which substantially developed their business or improved their performance by refocusing their business. "Corporate mission statements are the operational, ethical and financial guiding lights of companies. They are not simply mottoes or slogans; they articulate the goals, dreams, behaviour, culture, and strategies of companies".

One great advantage of formulation of the mission is that it also results in a clear definition of the business of a company. Mission statement and definition of the business are indeed two sides of the same coin.

Derect Abell has suggested defining business along three dimensions, viz, customer groups (i.e., who is being satisfied) customer functions (i.e., what need of the customer is being satisfied)



and alternative technologies (i.e., how the need is being satisfied). Such a three dimensional definition of the business would clearly delineate the boundaries and nature of the business. However, not many mission statements are so clear and comprehensive.

As Drucker suggests three fundamental questions would help to clearly define / redefine the business and formulate/reformulate the mission. These questions are:

- What is our business?
- What will our business be?
- What should our business be?

The question 'what is our business'? May lead to wonderful revelations and spectacular results. Drucker points out that most managers ask their question when the company is in trouble - then it must of course, be asked; but the most important time to ask this seriously is when a company has been successful and not to have done so is the reason for the crisis of many organisations.

It is, thus, evident that as the business environment is very dynamic, sooner or later even the most successful answer to the question what is our business, becomes obsolete. Therefore, it is not sufficient that a company determines what it's business is but at the same time it should also ponder over what will it be? 'What changes in the environment are already discernible those are likely to have high impact on the characteristics, mission, and purpose of our business? And how do we now build these anticipations into our theory of business, into it's objectives, strategies and work assignments?'

It is not adequate that a company identifies what will it's business be? Because this aims at adaptation to anticipated changes - modifying, extending, and developing the existing ongoing business. It does not explore the right firm - environment fit for the future. The future may have new or better opportunities outside the current business of the company, or it may not be wise to continue in all or some of the current businesses. There is, therefore, a need to ask 'what should our business be?' This question is the central point of corporate strategy.

As Drucker aptly remarks, the ultimate objective of strategic planning is "to identify the new and different businesses, technologies, and markets which the company should try to create long range. Indeed, it starts with the question which of our present businesses should we abandon? Which should we play down? Which should we push and supply new resources to Mission is meaningless unless it is adequately supported by other essential inputs. It is very apt to record here Amban's statement about what made the Reliance one of Asia's most competitive enterprises: "It has been a combination of vision, entrepreneurship and professionalism".

In sum, as Drucker remarks, "without an effective mission statement there will be no performance. The mission statement has to express the contribution the enterprise plans to make to society, to economy, to the customer. It has to express the fact that the business enterprise is an institution of society, and serves to produce social benefits".

### Specific Corporate Goals:

Based on the vision/mission statement, corporate objectives are finalised. After the broad corporate objectives are prepared, the Specific Corporate Goals are adopted by the company.



These specific goals are listed out as follows:

(These are to be adopted as a direction for the corporate plan period say for 5 years or 10 years)

- (i) To generate adequate resources to cover the dividends to the shareholders and also to leave sufficient resources for future.
- (ii) To adopt a business approach for -
  - production
  - flexibility in product-mix
  - timely delivery of products
  - differential pricing in different market segments as well as customers segments
  - value addition
- (iii) To develop export market with an annual target to be achieved.
- (iv) To enhance the production capacity matching the anticipated demands in both within the country and outside the country.
- (v) To increase the productivity of capital both in the investments already made and in the future investments so as to maximise the internal resource generation matching the financial ratios representative of the market and industry.
- (vi) To enhance labour productivity together with maintaining committed and motivated work force.
- (vii) To adopt diversification routes matching to the market opportunity.

### **The Characteristics of Strategic Objectives:**

An organisation must establish objectives if it is to measure how efficient the resource conversion process has been in relation to achieving its objective. Objectives should be established at three levels:

- Primary- that is corporate/strategy objectives which concern the company;
- Secondary - that is tactical/managerial objectives which concern the strategic business unit;
- Those at the lowest level, the operational/administrative objectives which are related to units such as departments.

Objectives are likely to be based on a combination of purpose and ethos. The purpose element relates to why the organisation was formed; this usually means that its activities must be to the benefit of shareholders: thus a major objective is likely to concern profit generation even if not to maximise shareholders' wealth. The ethos element concerns a concept similar to culture and so will interact with, and be developed within, the context of the history of the organisation and the environment within which it operates. Thus the ethos aspect of objectives will be influenced by such things as an organisation's history, traditions, ownership, size, approach to risk, what is produced, and method of production, markets, its attitude towards society and society's attitudes towards it.



An organisation will establish overall strategic objectives which in private-sector organisations are likely to be related to such factors as: profitability, which may cover capital gearing, retained profits, taxation, dividends and inflation; financial and physical resources related to internal and external capital, the latter classified by its form and source (e.g. whether obtained through leasing, etc.), production, related to such things as research and development, design, productivity, quality and packaging, management, covering performance, the organisation structure, the ability of the firm to recruit managers, their ability to communicate, quality, education and training, style and pecuniary rewards; employees' performance and attitude, which include their availability, training and development, quality, promotional opportunities, relationship with management and pecuniary rewards; marketing, including market standing, the products sold, services provided, market penetration, market position (i.e. share) and leadership (in pricing/innovation); and corporate social responsibility, which concerns such things as ethics, employee welfare, involvement in the local community, contribution towards environmental conservation and avoiding socially undesirable activities, and consumer protection.

In establishing objectives, remembering there may be multiple objectives for different factors and areas, although profitability must inevitably be one of the main ones, it is crucial to establish a balance between these other factors and the short- and long-term impact of these.

A number of groups, today frequently referred to as stakeholders, will influence the objective that an organisation can establish. These include shareholders, investment analysts, debt holders, customers, suppliers, trade associations, trade unions, government (both central and local), society, company directors, managers, supervisors and the workforce generally.

The traditional objective of the firm, drawn from the economic model of the firm operating in a situation of perfect competition, is profit maximisation. To achieve maximum profits the business has to know something about marginal analysis, and this really requires the owner to manage the business. It should be noted that short-run profit maximisation may not lead to long-run profit maximisation. However, since the Industrial Revolution, there has generally been a divorce of ownership from control in all but the smallest of firms and institutional investors (pension funds, unit trusts, investment trusts, trade unions, insurance companies, etc.) have increasingly taken up equity and today have a great influence on corporate objectives.

Profit maximisation is based on the following assumptions: there are a large number of buyers and sellers in the marketplace who act independently (i.e. there is no collusion); all products are homogeneous (i.e. exactly the same); all buyers and sellers have complete information about the market, and there are no barriers to entry into or exit from the industry. In the real world the entrepreneur will find it advantageous to break down these assumptions and gain a competitive advantage in so doing.

Today, the macro objectives of a firm include sales maximisation and growth and the development of such things as satisfying and the survival of the techno structure. It is important to balance an organisation's strategic objectives to enable it to achieve balanced growth and development.

John Argenti, in 'Setting Objectives - A Practical Approach', discusses practical aspects associated with setting objectives. He points out that, there is no general agreement as to what the long-term objectives of an organisation should be, though he provides examples of these



and, in pursuing them, the questions they cause to be raised. However, he spends considerable time discussing the importance of growth. He explains that an organisation is likely to have a number of subsidiary objectives. He concludes by discussing the characteristics of meaningful objectives.

John Fawn, in 'The History, Culture and Leadership of a Company', writes of the importance of leadership and culture to a company. He discusses Michael Porter's generic strategies of cost leadership, differentiation and focus and provides examples of these from real firms. He goes on to discuss when it may be necessary for an organisation to change its culture, and finally he looks at the position of the planner and company culture.

1. Objectives help define the organisation in its environment. Most organisations need to justify their existence, to legitimise themselves in the eyes of the government, customers, and society at large. And by stating objectives, they also attract people who identify with the objectives to work for them. Thus objectives define the enterprise.
2. Objectives help in coordinating decisions and decision makers. Stated objectives direct the attention of employees to desirable standards of behaviour. It may reduce conflict in decision making if all employees know what the objectives are. Objectives become constraints on decisions.
3. Objectives provide standards for assessing organisational performance. Objectives provide the ultimate standard by which the organisation judges itself. Without objectives, the organisation has no clear basis for evaluating its success.
4. Objectives are more tangible targets than mission statements. The products of an organisation or the services it performs (outputs) are probably the most familiar terms in which people tend to think of objectives or goals. (It's easier to see Hallmark as a producer of cards and gifts than to imagine the company as being in "the social-expression business".) Output goals may also be thought of in terms of quality, variety, and the types of customers or clients who are the intended target. Nonetheless, it may be deceptively easy to link output goals with mission definitions.

### Translation of Strategic Objectives into Specific Targets:

Corporate-level strategic objectives	Corporate and/or SBU specific targets
1. Improve return on assets	1. Increase return on net assets (after taxes) from 12 to 19 percent in 3 years.
2. Increase overall profit	2. Increase overall profit margin from 4 to 6 percent in 3 years
3. Increase sales by (a) Improving market penetration in existing markets	3. (a) Product A: Increase market penetration from 15 to 20 percent next year.  Product B: Increase market penetration from 20 to 25 percent in 2 years.



Corporate-level strategic objectives	Corporate and/or SBU specific targets
(b) Opening up new markets	(b) Move product from development to production (planned market penetration, 5 percent) in next year.
4. Increase manufacturing productivity	4. Purchase new equipment: \$3 million next year Establish a methods engineering department; improve rework rate by 5 percent over next year.
5. Improve management-union relations	5. Establish new industrial relations department and examine management's approach to labour problems immediately; reduce turnover rate 3 percent next year.

**Values:** Values or guiding principles that guide the journey to the vision by defining attitudes and policies for all employees.

**Target:** Define goals and/or objectives (sometimes called ideal state)

### Functional Strategies

Within the general framework of the grand strategy, each distinctive business function or division needs a specific and integrative plan of action. Most strategic managers attempt to develop an operating strategy for each related set of annual objectives (for example, there will be a functional strategy to indicate how the marketing department's annual objectives will be achieved, one for the production department's objectives, and so on).

Operating strategies are detailed statements of the means that will be used to achieve objectives in the following year. The company's budgeting process is usually coordinated with the development of the operating strategies to ensure specificity, practicality, and accountability in the planning process.

## Strategic Levels in Organisation

There are primarily three levels of strategies in the organisation.

1. Corporate Level
2. Business Level
3. Functional Level

### 1. Corporate Level:

The corporate level of management consists of the chief executive officer (CEO), other senior executives, the board of directors, and corporate staff. These individuals occupy the top-committee of decision making within the organisation. The CEO is the principal general manager. In consultation with other senior executives, the role of corporate-level managers is to oversee the development of strategies for the whole organisation. This role



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includes defining the mission and goals of the organisation, determining what businesses it should be in, allocating resources among the different businesses, formulating and implementing strategies that span individual businesses, and providing leadership for the organisation. For example, strategies formed for Unilever Limited would be at corporate level.

## **2. Business Level:**

A business unit is a self-contained division (with its own functions-for example, finance, purchasing, production, and marketing departments) that provides a product or service for a particular market. The principal general manager at the business level, or the business-level manager, is the head of the division. The strategic role of these managers is to translate the general statements of direction and intent that come from the corporate level into concrete strategies for individual businesses. Thus, whereas corporate-level general managers are concerned with strategies that span individual businesses, business-level general managers are concerned with strategies that are specific to a particular business. At GE, a major corporate goal is to be first or second in every business in which the corporation competes. Then the general managers in each division work out for their business the details of a strategy that is consistent with this objective. For example, strategies formed for Kwality Walls, a subsidiary of Unilever Limited would be at business level.

## **3. Functional Level:**

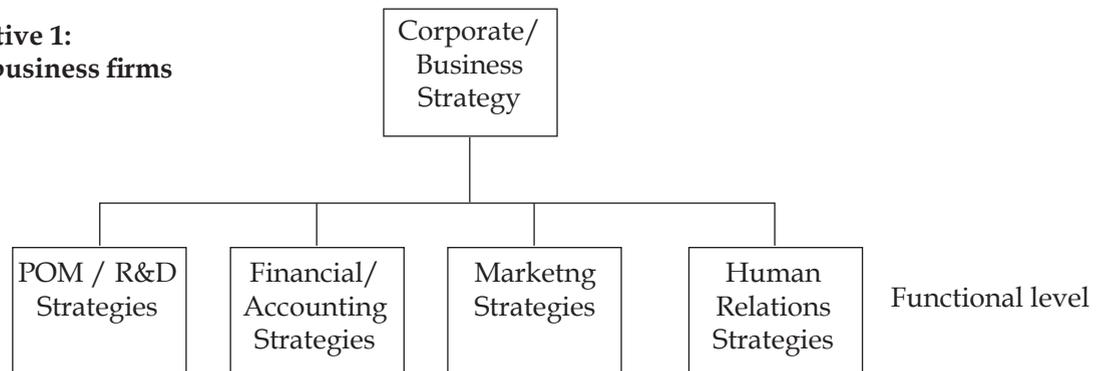
Functional-level managers are responsible for the specific business functions or operations (human resources, purchasing, product development, customer service, and so on) that constitute a company or one of its divisions. Thus, a functional manager's sphere of responsibility is generally confined to one organisational activity, whereas general managers oversee the operation of a whole company or division. Although they are not responsible for the overall performance of the organisation, functional managers nevertheless have a major strategic role: to develop functional strategies in their area that help fulfill the strategic objectives set by business & corporate-level general managers. Moreover, functional managers provide most of the information that makes it possible for business & corporate-level general managers to, formulate realistic and attainable strategies. Indeed, because they are closer to the customer than the typical general manager is, functional managers themselves may generate important ideas that subsequently may become major strategies for the company. Thus, it is important for general managers to listen closely to the ideas of their functional managers. An equally great responsibility for managers at the operational level is strategy implementation: the execution of corporate and business-level plans. For example, strategies formed for employee retention by HR manager at Kwality Walls would be at functional level.



**Figure: Alternative strategic management structures**

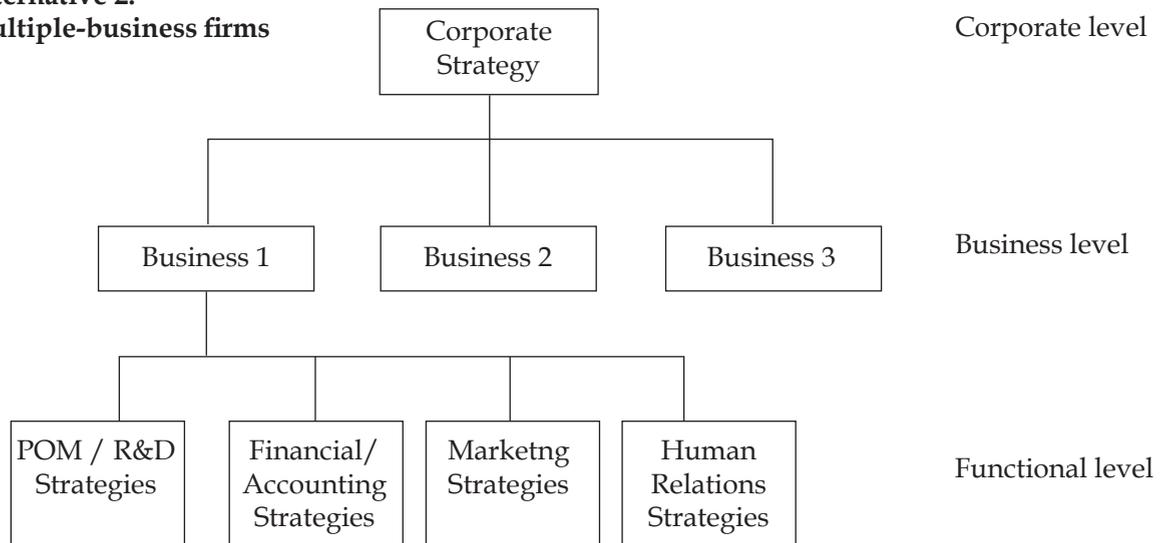
**Alternative 1:**

**Single business firms**



**Alternative 2:**

**Multiple-business firms**



It is their responsibility to develop annual objectives and short-term strategies in such areas as production, operations, and research and development; finance and accounting; marketing; and human relations. However, their greatest responsibilities are in the implementation or execution of a company’s strategic plans. While corporate and business-level managers center their planning concerns on “doing the right things,” managers at the functional level must stress “doing things right”. Thus, they directly address such issues as the efficiency and effectiveness of production and marketing systems, the quality and extent of customer service, and the success of particular products and services in increasing their market shares. Figure depicts the three levels of strategic management as they are actually structured in practice.

In alternative 1 the company is engaged in only one business and the corporate and business-level responsibilities are concentrated in a single group of directors, officers, and managers.

Alternative 2 is a classical corporate structure comprised of three fully operative levels. The superstructure is provided at the corporate level, with the superstructure at the business level giving direction and support for functional-level activities.



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## **Grand Strategy:**

The comprehensive, general plan of major actions through which a firm intends to achieve its long-term objectives in a dynamic environment is called the grand strategy. This statement of means indicates how the objectives or ends of business activity are to be achieved. Although every grand strategy is, in fact, a fairly unique package of long-term strategies, 12 basic approaches can be identified: concentration, market development, product development, innovation, horizontal integration, vertical integration, joint venture, concentric diversification, conglomerate diversification, retrenchment turnaround, divestiture, and liquidation. Any of these grand, master, or business strategies are meant to guide the acquisition and allocation of resources over an extended period of time. Admittedly, no single grand strategy, or even several in combination, can describe in adequate detail the strategic actions a business will undertake over a long period. However, when a firm's strategic managers are committed to a fundamental approach for positioning the business in the competitive marketplace, it provides a galvanising central focal point for subsequent decision making.

Some brief examples of grand strategies include Hewlett-Packard's technological innovation approach for capturing the high profit margins on new products, First Pennsylvania's retrenchment approach for avoiding bankruptcy despite \$75 million in 1980 losses, and General Electric's concentric diversification approach allowing growth through acquisition of related business.

## **Strategic Analysis and Choice:**

Simultaneous assessment of the external environment and company profile enables a firm to identify a range of possibly attractive interactive opportunities. These opportunities are possible avenues for investment. However, the full list must be screened through the criterion of the company mission before a set of possible and desired opportunities is generated. This process results in the selection of a strategic choice. It is meant to provide the combination of long-term objectives and grand strategy that will optimally position the firm in the external environment to achieve the company mission.

Consider the case when strategic managers feel that a firm is overly dependent on a single customer group, for example, a chain of record shops with principal customers 10 to 20 years old. The firm's interactive opportunities might include expanding the product line, heavily emphasising related products, accepting the status quo, or selling out profitably to a competitor. While each of these options might be possible, a firm with a mission that stressed commitment to continued existence as a growth-oriented, autonomous organisation might find that only the first two opportunities are desirable. In that case, these options would be evaluated on the basis of payoff and risk potential, compatibility with or capability for becoming the firm's competitive advantage, and other critical selection criteria.

A complicated sub process is used to derive the strategic choice. Strategic analysis involves matching each of the possible and desirable interactive opportunities with reasonable long-term objectives and targets. In turn, these are matched with the most promising means—known as grand strategies—for achieving the desired results. Each of the sets of alternatives is then evaluated individually and comparatively to determine the single set or group of sets that is expected to best achieve the company mission. The chosen set (or sets) is known as the strategic choice.



Critical assessment of strategic alternatives initially involves developing criteria for comparing one set of alternatives with all others. As is the case in making any choice, a company's strategic selection involves evaluating alternatives that are rarely wholly acceptable or wholly unacceptable. The alternatives are therefore compared to determine which option will have the most favourable overall, long-run impact on a firm.

Among the criteria used in assessing strategic choice alternatives are strategic managers' attitudes toward risk, flexibility, stability, growth, profitability, and diversification. Other factors included in the decision-making process are volatility of the external environment, life-cycle stages of the evaluated products, and the company's current level of commitment to its organisational structure, access to needed resources, traditional competitive advantages, as well as the potential reaction of influential external or internal interest groups.

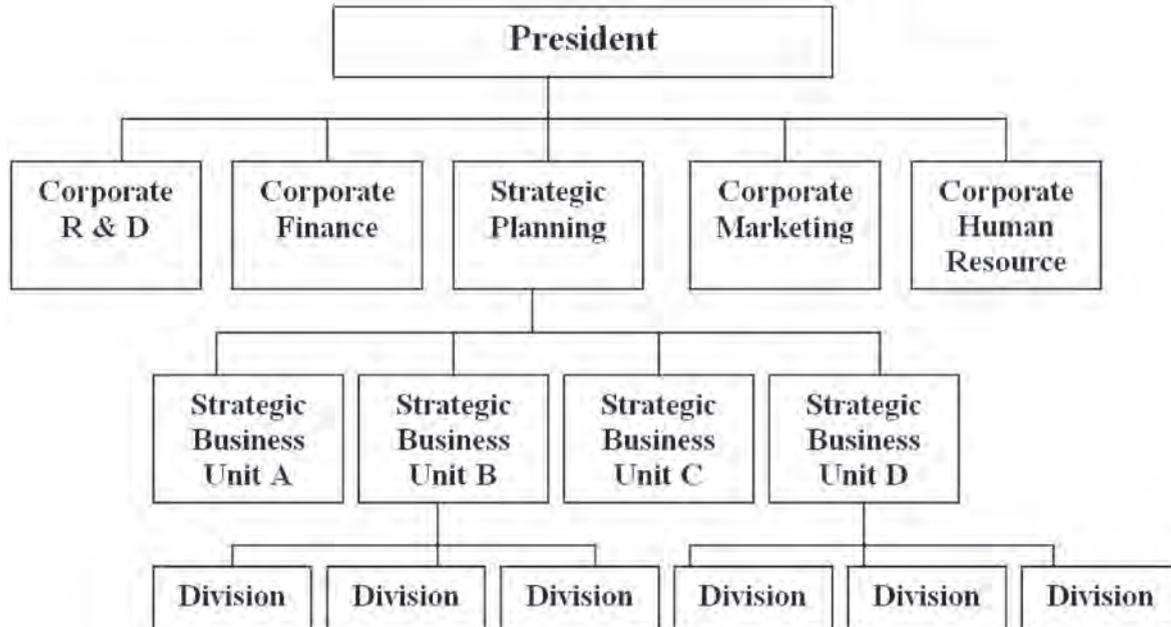
### **Strategic Decision Making:**

Decision making is a managerial process and it is a function of choosing a particular course of action out of several alternative courses for the purpose of achieving organisation's objectives and goals. Decisions may relate to general day to day operations, can be major or minor. They may also be strategic in nature. Strategic decisions are different in nature than all other decisions which are taken at various levels of the organisation during day-today working of the organisations. The major dimensions of strategic decisions are:

- Strategic decisions require top-management involvement: Strategic decisions involve thinking in totality of the organisations and also there is lot of risk involved. Hence, problems calling for strategic decisions require to be considered by top management.
- Strategic decisions involve the allocation of large amounts of company resources: It may require huge financial investment to venture into a new area of business or the organisation may require huge number of manpower with new set of skills in them.
- Strategic decisions are likely to have a significant impact on the long term prosperity of the firm: Generally the results of strategic implementation are seen on a long term basis and not immediately.
- Strategic decisions are future oriented: Strategic thinking involves predicting the future environmental conditions and how to orient for the changed conditions.
- Strategic decisions usually have major multifunctional or multi-business consequence: As they involve organisation in totality they affect different sections of the organisation with varying degree.
- Strategic decisions necessitate consideration of factors in the firm's external environment: Strategic focus in organisation involves orienting its internal environment to the changes of external environment.

### **Strategic Business Units (SBU) Structure:**

SBU groups similar divisions into "Strategic Business Units" and then delegate's authority and responsibility of each unit to a senior executive who is normally identified as CEO or MD of that SBU. It is an extension of Divisional structure.



### SBU Structure

Big organisation like Unilever, etc have many SBUs for their different categories of products like Cosmetics, Food products and Beverages, etc, and each is managed through separate unit head.

#### Advantages:

- Promotes accountability since units' heads are responsible for individual SBU profitability
- Career development opportunities are further higher in this structure
- Allow better control of categories of products manufacturing, marketing and distributions
- Helps to expand in different related and unrelated businesses

#### Disadvantages:

- May provide inconsistent approach to tackle customers, etc, because each unit may work in it's own way to handle situations
- High cost approach

#### Matrix Organisation Structure:

The above structures (Functional, Divisional and SBU) consist of flow of authority from top to bottom i.e. vertical flow whereas Matrix structure contains both vertical and horizontal flow of communications or authority. This type of structure is frequently used in IT organisation for managing different projects. Each individual project is managed by a project manager and projects manager will have his team arranged under him.



### **Advantages:**

- Useful for some specific industries like Information Technology, Healthcare etc.
- Employee can see visible results of their efforts
- Remove barrier to communications
- Managing projects are easy
- Effective structures when environment is very dynamic

### **Disadvantages:**

- Complex structure as this contains both vertical and horizontal flow of information
- High cost approach due to more management positions
- Dual lines of authority
- Conflicts arises in the allocation of resources

## **Strategic Business Units (SBU) & Core Competence:**

- SBU is a grouping of related businesses, which is open to complex planning treatment.
- Multi-business enterprise groups it's various businesses into a few distinct business units in a scientific way known as SBUs.
- The purpose is to provide effective strategic planning treatment to each one of it's products /businesses.
- SBU concept is relevant to a multi-product, multi-business enterprises like Unilever Limited
- In other words, the SBU concept helps a multi-business corporation in scientifically grouping it's businesses into a few distinct business units. Such a grouping would in it's turn, help the corporation to carry out it's strategic management practices in better manner.

Some of major reasons of using SBU approach are as follow:

- A scientific method of grouping the businesses of a multi-business corporation which helps the firm in strategic planning.
- An improvement over the geographical grouping of businesses and strategic planning based on locational units.
- An SBU is a grouping of related businesses that can be taken up for strategic planning distinct from the rest of the businesses.
- Grouping the businesses on SBU lines helps the firm in strategic planning by removing the ambiguity and confusion generally seen in grouping businesses.
- Each SBU is a separate business from the strategic planning standpoint. In the basic factors, viz., mission, objectives, competition and strategy-one SBU will be distinct from another.
- Each SBU will have it's own distinct set of competitors and it's own distinct strategy.



- Each SBU will have a CEO. He will be responsible for strategic planning for the SBU and its profit performance; he will also have control over most of the factors affecting the profit of the SBU.

#### **The three most important Characteristics of SBU are:**

- It is a single business or a collection of related businesses which offer scope for independent planning and which might feasibly stand alone from the rest of the organisation.
- Has its own set of competitors.
- Has a manager who has responsibility for strategic planning and profit performance, and who has control of profit-influencing factors.

### **Operational Planning:**

While strategic planning is the prerogative of the top management which is the highest policy making body in any organisation, operational planning is done at the lower levels. Strategic planning is mostly concerned with the “Why” of the things whereas operational planning is concerned with the “How” of the things - that is the knitty-gritty of achieving the things.

The focus in strategic planning is on long-term while it is short-term in operational planning. Further, planning is less detailed in the former because it is not involved with the day-to-day operations whereas it is more detailed in the latter. Tactical planning is the other name used to describe operational planning.

Strategic planning provides guidance and boundaries for operational management. Effective management, therefore, must have a strategy and must operate on the day-to-day level to achieve it. At times both may overlap. However, they should not be viewed as mutually exclusive because operational planning identifies the major activities to achieve the objectives of strategic planning. For example, if the strategic plan is to face competition with new and innovative products, major tasks to achieve this goal would be clarified by operational planning. The possible tasks at the operational level include:

- Strengthening the research and development department;
- Motivating the people to work on new products; and
- Creating a climate in the organisation where people are willing to take risks.

In the implementation of strategic plans, it is common that certain departments have far more to do than others. In the above example, in order to bring out new products the operational aspects of the R & D department's work culture, and the incentives systems to motivate the people need attention.

### **Environmental Analysis:**

Environment refers to all external forces which have a bearing on the functioning of business. “Environment factors or constraints”, wrote Barry M. Richman and Melvyn Copen, “are largely if not totally, external and beyond the control of individual industrial enterprises and their managements. These are essentially the ‘givers’ within which firms and their managements must operate in a specific country and they vary, often greatly, from country to country”.



The environment poses threats to a firm or offers immense opportunities for exploitation. Stressing this aspect, William F. Glueck and Lawrence R. Jauch wrote thus: “The environment includes factors outside the firm which can lead to opportunities for or threats to the firm. Although there are many factors, the most important of the sectors are socio-economic, technological, supplier, competitors, and government”.

As per the second definition, environment includes such factors as socio-economic, technological, supplier, competitor and government. While all these are highly relevant, there are two more factors which are not included in the definition, and which exercise considerable influence on business. They are physical or natural environment and global environment. Including these two the total environment of business, for our purposes, will include six factors, viz., and political-legal, economic, social-cultural, and technological global and natural. A brief description of each, however, follows in the following paragraphs.

Technological environment exercises considerable influence on business. Technology is understood as the systematic application of scientific or other organised knowledge to practical tasks. It is through business that technology reaches people. Technology changes fast and to keep pace with it, businessmen should be ever alert to adopt changed technology to their businesses.

Economic environment refers to all forces which have an economic impact on business. Industrial production, agriculture, planning, basic economic philosophy, infrastructure, national income, per capita income, money supply, price level, population, savings, stages in the economic development and trade cycles are major factors which make up the total economic environment. There is close relationship between business and its economic environment. Business obtains all its needed inputs from economic environment and it absorbs the output of business units.

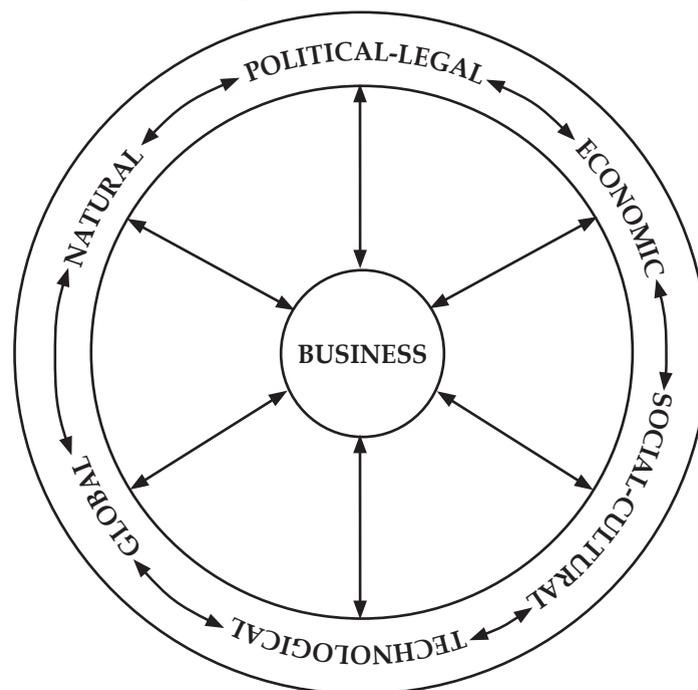
Political environment refers to the influence exerted by the three political institutions, viz., legislature, executive and judiciary in shaping, directing, developing and controlling business activities. The legislature decides on a particular course of action; the executive, also called government, implements whatever was decided by parliament and the judiciary plays the watchdog role in order to ensure that both the legislature and the executive function in public interest and within the boundaries of the Constitution. A stable and dynamic political environment is indispensable for business growth.

Nature has not met with total success. He has no answer, for example, for the flourishing affluence coexisting with stark poverty; severe droughts and devastating floods occurring the sickening regularity; and some other such phenomena. Man still bows down before the mighty nature. Business, an economic pursuit of man, continues to be dictated by nature. The extent business depends on nature and what is the relationship between the two constituting an interesting study.

Yet another environmental factor which is fast emerging as the force to reckon with is the global or international environment. Thanks to liberalisation, Indian companies are forced to view business issues from global perspective. Business responses and managerial practices must be fine tuned to the global environment. Manager must understand that safe and protected markets are no more there; that world is becoming small in size, thanks to advanced means of transport and communication facilities; that learning of foreign languages is a necessity; that

acquiring familiarity with strange and changing currencies is a must; that facing political and legal uncertainties is inevitable; and that adapting their products to different customer needs and tastes would only help them survive amidst intense competition. Implications of global environment are elaborated in one of the subsequent sections.

Thus, business is the product of the technological, political-legal, economic, social-cultural, global and natural factors amidst which it functions. Three features are common to this web of relationship between business and it's environment. First, there is symbiotic relationship between business and it's environment and among the environmental factors. In other words, business is influenced by it's environment and in turn, to a certain degree, it will influence the external forces. Similarly, political-legal environment influences economic environment and vice versa. The same is the relationship between other environment factors too.



**Fig.:** Symbolic Relationship between Business and it's environment

The second feature is that these environmental factors are dynamic. They keep on changing as years roll by, so does business.

The third feature is that a particular business firm, by itself, may not be in a position to change it's environment. But along with other firms, business will be in a position to mould the environment in it's favour, to a large extent.

### **Uses of Study of Objectives and Environmental Analysis:**

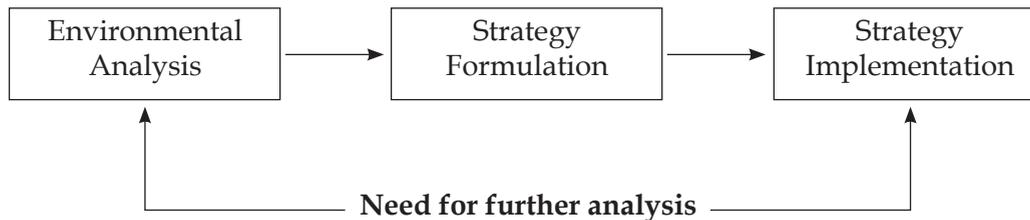
Environmental analysis has three basic goals.

**First**, the analysis should provide an understanding of current and potential changes taking place in the environment. It is important that one must be aware of the existing environment.



At the same time one must have a long term perspective too.

**Second**, environmental analysis should provide inputs for strategic decision making. Mere collection of data is not enough. The information collected must be used in strategic decision making.



Third, environment analysis should facilitate and foster strategic thinking in organisations - typically a rich source of ideas and understanding of the context within which a firm operates. It should challenge the current wisdom by bringing fresh view-points into the organisation.

To be specific, the benefits of environmental study are as follows:

1. Development of broad strategies and long-term policies of the firm.
2. Development of action plans to deal with technological advancements.
3. To foresee the impact of socio-economic changes at the national and international levels on the firm's stability.
4. Analysis of competitors' strategies and formulation of effective counter-measures.
5. To keep oneself dynamic.

William F. Glueck and Lawrence R. Jauch stress the negative consequence of failure to study the environment. Write them, in the years between 1918 and 1968, almost half of the 100 largest American firms went out of business or became significantly less important to society. Often, a company becomes convinced that it is almost invincible and does not have to examine what is happening in the market place. When the company ceases to adjust the environment to its strategy or does not react to the demands of the environment by changing its strategy or does not react to the demands of the environment by changing its strategy, the result is lessened achievement of corporate objectives.

The learned authors went on to stress that, Environmental analysis and diagnosis give strategists time to anticipate opportunities and to plan to take optional responses to these opportunities. It also helps strategists to develop an early warning system to prevent threats or to develop strategies which can turn a threat to the firm's advantage.

Without a systematic environmental search and diagnosis, the time pressure of the managerial job can lead to inadequately through out response to the environmental changes. It is clear that because of the difficulty to assessing the future, not all future events can be anticipated. But some can and are. To the extent that some or most are anticipated by this analysis and diagnosis, managerial decisions are likely to be better. And the process reduces the time pressures on the few which are not anticipated. Thus, the managers can concentrate on these few instead of having to deal with all the environment opportunities and threats in the pressure-cooker environment.



Firms which systematically analyse and diagnose the environment are more effective than those which don't.

In order to further substantiate the benefits of environmental analysis it may be said that the real value of the analysis inheres in the product of the analysis as well as the process of engaging in it.

At the product level, the outputs of environment analysis generally consist of

- descriptions of changes currently taking place,
- harbingers of potential changes in the future, and
- alternative descriptions of future change.

Together they provide descriptions of alternative futures.

Such descriptions provide organisations with lead time to identify understand and adapt to external issues, to anticipate the consequences of the environmental trends, and to develop well through out positions and policies. In addition, lead time enables organisation to convert emerging issues from threats to opportunities.

At the level of process, environmental analysis underscores the notion that organisations are necessarily pervious to be influence of outside forces. When conducted properly, this leads to enhanced capacity and commitment to understanding, anticipating and responding to external changes on the part of the firm's key strategic managers. Responsiveness is achieved by inducing managers to think beyond their task or industry environments, often forcing them to reflect upon their cognitive biases. In short, at the process level, environmental analysis offers one basis for organisational learning.

### **Limitations of Environmental Analysis:**

Environmental analysis, as with any other analysis, has certain limitations. These limitations are:

1. Environmental analysis does not foretell the future, nor does it eliminate uncertainty for any organisation. Thus, organisations that practice environmental analysis sometimes confront unexpected events - events not anticipated during environmental analysis. Environmental analysis, however, should reduce the frequency and extent of surprises that may confront a company.
2. Environmental analysis in and of itself is not a sufficient guarantor of organisational effectiveness. It is only one of the inputs in strategy development and testing.
3. The potential of environmental analysis is often not realised because of how it is practised. It is sometimes used as a crutch for post hoc reflections. At times managers place uncritical faith in the data without thinking about the data's verifiability or accuracy.
4. Too much reliance is often placed on the information collected through environment scanning. When there is overloading of information, one is likely to get lost and become inactive typical of paralysis through analysis syndrome.



## Competitive Environment:

Closely allied with the economic environment is the competitive environment. With growing industrialisation, expanding size of business operation and rapid advancement of technology, degree of competition within the industry and across the industry has increased tremendously. There is neck-to-neck competition among the business organisations who are investing massive funds on research and development to innovate new methods of production or new uses of existing products or adopting new marketing devices in their market share. Under these circumstances managers must be fully aware of the competitive environment and formulate strategy to cope with the competition.

The competitive environment should be analysed from the viewpoint of all such factors which affect the ferocity of competitive behaviour. These factors are market share of the participants in the industry, growth, rate of the industry, general level of profits, cost of entry into and exit from an industry, degree of differentiation, and economies of scale and nature of product.

Analysis of market share of different firms at a point of time and over a period of time provides an insight into the competitive strength of the organisation. Such analysis should be undertaken to discern the factors responsible for differential market share of firms. These factors could be product differentiation, pricing, high corporate competence, wide distribution network, customer service, dispensation of discount facilities, etc. The management must keep these factors in view while formulating strategy. Furthermore, analysis of the competitive environment presents a picture of dominance of the industry by a few firms. An industry dominated by one firm having a significant market share tends to be less fiercely competitive than the one having no firm with dominant market share.

In studying the competitive environment it should also be the prime concern of the management to find out if there is a minimum critical mass for the product. Critical mass is the market share which a firm must obtain so as to become fully competitive on price and cost.

Growth rate of the industry decisively affects the competitive behaviour. Where growth rate of the industry is relatively high and demand of industrial products tends to expand, competitive behaviour will be less aggressive because each firm can increase its sales without necessarily increasing its market share. But in an industry with falling growth rate, competition will tend to be intense. In such a situation the management should diversify the product line.

High level of profits in one industry is likely to provide a measure of tolerance for competitors. A change to tower profits may trigger off more aggressive behaviour.

Cost of entry and exit is another vital factor which needs comprehensive appraisal. If market shares in the industry are widely diffused and small investment is needed to enter the business and if the government does not foreclose entry to the industry, there will be great mobility of firms in and out. In such a case, a firm in the industry lacks security of its position because any entrepreneur with a small capital and small operation can enter the market. Such a tendency poses a serious threat of entry particularly to large established organisations which lack the flexibility and quick response possessed by small firms. Small organisations will, however, consider such an environment as an opportunity to them. Where investment is large, highly specialised and fixed costs are a relatively high proportion of total costs; competition will not be aggressive because the scope of new entrants will be very limited.



High degree of product differentiation creates a barrier to entry of new firms since they might have to spend a great deal on advertising and sales promotion in order to overcome the loyalty of consumers to the existing brand. But the competition is likely to be fiercest when all firms are offering products of commodity status.

Competitive behaviour is likely to be more aggressive when there exist marked economies of scale in the industry. This may happen when cost levels depend on large volumes. The competitive behaviour will tend to be fiercer in a growth market with elastic demand and product subject to mass production. However, new firms will have to be very large so as to avoid cost disadvantages.

Nature of the product is another factor to be considered while studying the competitive environment-A durable product is likely to be less vulnerable to random price cutting than one which can not be preserved easily and cheaply.

The management must also try to study the possibility of availability of substitutes of the product in the market because the industry's prospects depend on it. With the emergence of a new substitute, a number of new firms with different cost structures may come into existence in the competitive arena. A substitute will often increase the buying power of the buyer and decrease the power of the seller.

### **Internal Environment:**

A firm's internal analysis determines its performance capabilities based on existing or accessible resources, from this analysis, a company profile is generated. At any designated point in time, the company profile depicts the quantity and quality of financial, human, and physical resources available to the firm. The profile also assesses the inherent strengths and weaknesses of the firm's management and organisational structure. Finally, it contrasts the historical successes of the firm and the traditional values and concerns of management with the firm's current capabilities in an attempt to identify the future capabilities of the business.

### **External Environment:**

A firm's external environment consists of all the conditions and forces that affect its strategic options but are typically beyond the firm's control. The strategic management model shows the external environment as consisting of two interactive and interrelated segments: the operating environment and the remote environment.

The operating environment consists of the forces and conditions within a specific industry and a specific competitive operating situation, external to the firm, that influence the selection and attainment of alternative objective/strategy combinations. Unlike changes in the remote environment, changes in the operating environment often result from strategic actions taken by the firm or its competitors, consumers, users, suppliers, and/or creditors. Thus, a consumer shift toward greater price consciousness, a loosening of local bank credit restrictions, a new entrant into the marketplace, the development of a substitute product, or the opening of a new wholesale outlet by a competitor are all likely to have direct and intentional positive or negative effects on a firm.

The remote environment refers to forces and conditions that originate beyond and usually irrespective of any single firm's immediate operating environment and provide the general



economic, political, social, and technological framework within which competing organisations operate. For example, a company's strategic planners and managers may face spiraling inflation (economic), import restrictions on raw materials (political), demographic swings of population in the geographic areas they serve (social), or revolutionary technological.

### **Roles of different Strategists:**

The term strategist refers to those who are involved in strategy formulation. In large organisations, board of directors, general managers, and corporate planning staff (if there is such a division/cell) and, in some cases, external consultants may play a role in strategic planning.

#### **Board of Directors:**

The board of directors plays an important role in corporate strategy making. The ultimate legal authority in business is that of the board of directors. Boards are held responsible to the stockholders for the following duties: ensuring the continuity of management (replacing or retiring managers), protecting the use of stockholders' resources, ensuring that managers take prudent actions regarding corporate objectives, approving major financial and operational decisions of the managers, representing the company with other organisations and bodies in society; maintaining, revising and enforcing the corporate charter and by laws.

The Board does not directly formulate the strategy, but it can and should play an important role in strategic management by causing the formulation of the corporate plan, evaluating it, reviewing it, evaluating its implementation and by its power to appoint or remove the chief executive officer (CEO). Kenneth Andrews observes: "A responsible and effective board should require of its management a unique and durable corporate strategy, review it periodically for its validity, use it as a reference point for all other board decisions, and share with management the risks associated with its adoption".

When the board of directors is an inside board (i.e., majority of the members consists of persons holding management positions in the company), inside members may directly involve in strategy formulation by the virtue of the management positions they hold. When the board is an outside one (i.e., majority of the members do not hold management positions in the company) and the outsiders are capable persons, the evaluations, reviews and directions could be more independent objective and meaningful. However, outside board could sometimes cause conflicts also.

According to Dr. A.S. Ganguly, Chairman, ICI India Ltd., "the Board, as a whole, has the responsibility to initiate discussion, agree and underwrite the corporation's strategic plans". The Board has the collective responsibility to ensure its implementation through agreed operational plans. Individual Executive Directors are responsible and accountable to meet the targets for specific business under their control.

However, it is generally acknowledged that the Boards of many Indian companies are not effective. Here is the case of a well known company, for example, The Glaxo India Ltd. had a Board consisting of several non-executive and executive members. "Board meetings did not usually focus much on the performance of the business or its new investments, but dealt with a number of formal legal and accounting matters. Some of the non-executives had been on the



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Board for over a decade with the resultant natural tendency to resist change and defend the past. The executive directors as individuals did not have much independence of views as the tradition of the company was that they toed the line laid down by the Managing Director in charge, as people do in any gentlemen's club.

Therefore, one of the first steps was to change the functioning and the composition of the Board by arranging for the older non-executives to retire and to replace them by younger non-executives with experience in finance and marketing.

It is very essential that on any company's Board there should be some independent, professionally qualified non-executive Directors. At the same time there should be a regular retirement policy for non-executive directors with a clear understanding of their period for which they are appointed, so that there is no misunderstanding when the time comes of them to step down. This is an essential part of Corporate Governance.

Sometimes it is very difficult for a Chief Executive who has been steeped in the tradition of company and had been involved in many of its investments which are not performing to accept the need to change or to extricate from the past. There are loyalties and sentiments to be overcome, especially if the CEO is a sensitive individual. A change could become necessary even at that level in order to facilitate the process of change.

Looking back perhaps the most important change in the company was this change in the composition and quality of the Board. It is not easy to change a Board and it takes time but if a business has to be rejuvenated the first place to start is at the Board level. Whether it is a company or a nation the quality of leadership has the single largest impact on its performance.

The draft Code on desirable Corporate Governance formulated by Confederation of Indian Industry (CII), has laid down, inter alia, the following principles.

- The full board, which should be single tiered, should meet at intervals of two months, and at least six times a year.
- The non-executive directors should comprise at least 30 percent of the board if one of them is the chairman.
- The non-executive directors should comprise at least 50 percent of the board if the chairman and the managing director is the same person.
- No individual should be a director on the boards of more than 10 companies at any given time.
- Non-executive directors should be active, have defined responsibilities, and be conversant with P & L accounts.
- Non-executive directors should be paid commissions for their professional inputs besides their sitting fees.
- Directors who have not been present for at least 50 percent of board meetings should not be re-appointed.
- The board should be informed of operating plans and budgets, long-term plans, quarterly divisional results, and internal audit reports.



Details of defaults, payments for intangibles, foreign exchange exposure, and managers'

- Remuneration should be reported to the board.
- An audit committee, comprising at least three non-executive directors, should be set up and given access to all financial information.

### **General Manager:**

The role of General Managers (GM) in strategic management is clear from the fact that strategic management is a general management function.

The general managers are the top executives of the enterprise and SBUs who are responsible for the survival and success of the enterprise.

The GM is the entrepreneur (sets goals), strategist (plans), organisation builder (organisers), leader (directs), and chief implementer (controls). The task is to lead the firm or SBU through uncharted territory in less than-certain circumstances.

The most important GM, obviously, is the CEO. As George Steiner rightly points out, "there can and will be no effective formal strategic planning in an organisation in which the chief executive does not give it firm support and make sure that others in the organisation understand his depth of commitment".

### **Corporate Planners:**

Large organisations may establish a corporate planning division or cell. It is a staff function and these staff personnel are known as corporate planners.

Functions and responsibilities of the corporate planning staff include:

1. Keeping track of the latest developments in the field of strategic management and disseminating such information to the strategists.
2. Supplying data inputs and analytical support needed for strategic management.
3. Environmental analysis.
4. Identifying new business opportunities.
5. Helping to establish a planning system.
6. Formulating guidelines for preparing plans.
7. Coordinating divisional plans.
8. Assisting to evaluate and control strategies.

### **Strategic Management Consultants:**

Some organisations, particularly those which do not have a corporate planning staff, make use of the services of strategic management consultant. Several Indian companies have sought the services of such consultants like McKinsey, Anderson Consulting Arthur D Little, Arthreya, Tata Consultancy etc.



## Profit Gap, Sales Gap, Risk Gap and Other Strategies:

### Gap Analysis:

- (a) Examines the current position of a company as regards its recent operational performances, resources, activities of its competitors, external economic conditions, price elasticity of demand for its products, its current and planned research and development programme, the constraints imposed on its actions by its corporate objectives, and the current stages reached in the life-cycles of its products.
- (b) Points out the implications and consequences of alternative courses of action designed to realise the profit target. The alternative courses will carry different levels of risk. For example, if the company intends to conduct a massive price war against its competitors, the risk will be rather different than if it decides to concentrate on a new product line. The phasing of future costs and revenues will give different results according to the discounted rate adopted to bring them into line with current values as well as the access of the company to additional finance.

The issues involved are so wide ranging and fundamental to any organisation that gap analysis is coterminous with corporate planning, management policy, top management planning, long-range planning or corporate strategy.

Each product line should be carefully examined to decide whether the demands it makes on resources are justified by its contribution to corporate profits. It is not sufficient merely to be satisfied that the product is profitable but that it is not using resources which could be better deployed elsewhere. Evaluative criteria are needed to facilitate the comparability of product profitability to arrive at optimum distribution of resources. Thus, answers to the following questions are needed for each product:

- What is the degree of risk in the short term or Long term?
- Opportunities for synergy, i.e. common distribution channels, warehousing, salesmanship, advertising?
- Degree of product differentiation in the markets?
- Strength of competitors?
- Opportunities for diversification, acquisition, growth, increased market share?
- Prospects of new or improved features?
- Demands on resources – manpower, finance, plant and machinery?
- Reliability of supply of essential raw materials?
- Accuracy of forecasting techniques?

Gap analysis depends on the ability of the firm to forecast performance into the future. It is valuable to consider carefully what this involves.

Forecasts and projections are different. A projection is an expected future trend pattern obtained by extrapolation. It is principally concerned with quantitative factors, whereas a forecast includes judgements. Whereas a forecast is a prediction of future events and their quantification for planning purposes.



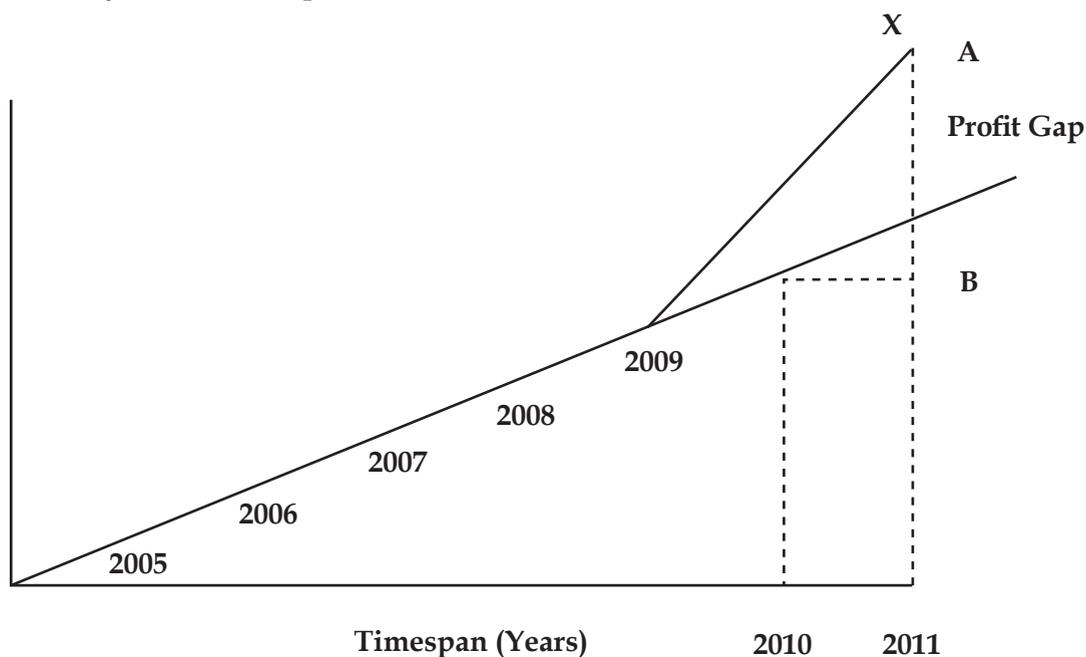
Although capable of quantification a forecast is not derived purely from a mathematical process. This is because of the problem of uncertainty. If management believe that the future is likely to be substantially different from the present, say due to the threatened arrival of a new competitor, they will not be able to rely on projecting sales volumes and prices on the basis of past data. They need to add in assumptions.

One of the reasons that gap analysis has declined in popularity, along with planning approaches to strategy in general, is because of the problem of uncertainty which makes forecasting very difficult. Many managers regard it as too fraught with inaccuracies and prefer to perceive of strategy as a process of developing core competences instead.

However, chartered management accountants still need forecasts in order to permit budgeting for profits and deciding on capital expenditure. Without forecasts it is hard to see how financial control can be exercised.

The determination of the methods and techniques used to fill the “gap” between corporate sales and financial objectives and the current long-range forecasts of the sales team.

A simple illustration can be used to demonstrate the principle: Let us assume a firm has it’s accounts at the end of 2010 and has decided on it’s profit target for 2011 and that the profit for the past few years has been plotted as follows:



The profit projection for 2011 based on past performance can be calculated in several ways such as:

- a. Freehand projection
- b. Linear regression coefficient
- c. Exponential smoothing



However, whichever method is adopted, it would show a profit expectation which could be compared with the targeted profit and in this diagram there would be a profit gap of 'AB' if the trend continues. An alternative approach, equally acceptable, compared the 2011 profit with the 2011 targeted profit represented by 'A' and 'B' – and this becomes the profit gap.

**Sales Gap:** A performance gap is the difference between the planned performance and the actual performance or progress. Any deviation between the plan and the actual can be identified only after the activities are completed. As such, the interval between noticing the deviation and taking corrective action becomes very crucial. Sales gap is, as such, the difference or shortfall of the actual sales volume vis-à-vis the targeted volume of sales. Here, sales forecasting is a very important task for projecting the future sales of a company. The importance of sales forecasting to business planning can hardly be over-emphasised. A forecast is a prediction or estimation of future. Since the future is uncertain, no forecast can be cent per cent correct.

Thus, there is a paradox in forecasting; every firm needs sales forecasts but none can predict sales accurately. Nevertheless, every firm aims to obtain as precise a forecast as possible. To ascertain the sales gap, measuring the performance relating to sales volume, market share, market standing and marketing costs are essential. Tools like sales and marketing audit are also very useful here.

**Product Gap:** Product development is the creation and adjustment of the product or services in order to respond to customers' demand. A product line gap arises from a difference between what a firm offers in terms of product items and what the industry provides in terms of product line.

**Risk Gap:** In corporate business planning, some amounts of risks are always to be anticipated and strategically accepted. There is a proverb 'No Risk, No Gain'. So, to avail of opportunities and achieve gain, certain risky ventures may have to be undertaken provided such risks can be tackled properly to turn these in favour of the business. Many uncertain risks may open up lot of business opportunities. Attitude towards risks exerts considerable influence on strategic decision. These attitudes may vary from merger risk taking to strong aversion to risk and they influence the range of available opportunities and strategic decisions. Where attitudes favour risk, the range and diversity of strategic choices expand. In making a strategic decision, a risk-oriented manager leans towards opportunistic strategies with high payoffs. However, any gap between the anticipated risk with strategic decision and the actual happening of such risk with material result need be measured for the interest of the organisation. These help in future risky ventures with innovation, organisational strength and operating potential.



## PART-B

### Major Contents of Part B:

- SWOT Analysis
- Target Selling Strategy
- Stagnation; Growth Strategies
- Core competency
- Distinctive capability

### Swot Analysis:

Gathering data about the general, operating, and internal environments provides the raw material from which to develop a picture of the organisational environment.

**SWOT analysis** refines this body of information by applying a general framework for understanding and managing the environment in which an organisation operates. (The acronym SWOT stands for Strengths, Weaknesses, Opportunities, and Threats.) In many respects, the sophisticated analytical techniques discussed throughout the text are further refinements of basic SWOT analysis. In addition, students have repeatedly told us that SWOT is an excellent way to begin a case analysis. SWOT analysis attempts to assess the internal strengths and weaknesses of an organisation and the opportunities and threats that its external environment presents. SWOT seeks to isolate the major issues facing an organisation through careful analysis of each of these four elements. Managers can then formulate strategies to address key issues.

The appraisal should give particular attention to the following.

- a. A study of past accounts and the use of ratios. By looking at trends, or by comparing ratios (if possible) with those of other firms in a similar industry, it might be possible to identify strengths and weaknesses in major areas of the business. The assistance of a management accountant should be of great value in this work.
- b. Product position and product-market mix. This very important area is dealt with later.
- c. Cash and financial structure. If a company intends to expand or diversify, it will need cash or sufficient financial standing in order to acquire subsidiaries by issuing shares.
- d. Cost structure. If a company operates with high fixed costs and relatively low variable costs, it might be in a relatively weak position with regards to production capacity. High volumes of production and sale might be required to break even. In contrast, a company with low fixed costs might be more flexible and adaptable so that it should be able to operate at a lower breakeven point.
- e. Managerial ability. There may be a problem in attempting to assess this and objective measurements should be sought. The danger is that a poor management might overestimate their own ability and incorrectly analyse their weakness as strength.



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The purpose of the analysis is to express, qualitatively or quantitatively, which areas of the business have strengths to exploit, and which areas have weaknesses which must be improved. Although every area of the business should be investigated, only the areas of significant strength or weakness should warrant further attention.

While finalising the corporate plan together with corporate objectives, growth strategies, it would be necessary to make a review of the corporate strengths and weaknesses in connection with its mission and objectives. This is an important managerial task linked with corporate planning process. Corporate strengths and weaknesses can be broadly enumerated as under:

### **Corporate Strengths:**

Highly professionalised managerial group including directors and the chief executive an environment prevailing for commitments to jobs and responsibility with team spirit by the work force:

- Financially very sound;
- Good products and product-mix with high demand including future prospects;
- Full capacity utilisation, locational advantages;
- Good infrastructures;
- Good industrial relations;
- No political interference;
- Good performance in production and services with consistent records;
- Good raw materials base;
- Incentives from State Government;
- Good relation with Government departments;
- Technologically rich and with expertise;

This, these are the corporate strengths within and outside the organisation.

### **Corporate Weaknesses:**

Similar to Corporate strengths, there may be corporate weaknesses too. These may be enumerated as under:

- Under-utilisation of capacity due to economic slump;
- High debt burden in the capital structure;
- Poor product-mix;
- Lack of managerial strengths;
- Industrial unrest;
- Technology gap;



- Demand gap;
- Poor infrastructures;
- Raw materials source at a distance;
- Lack of latest information technology;
- Competition war;
- Global threats.

Both corporate strength and corporate weaknesses are examined and reviewed together in connection with corporate mission and objectives. A balanced and appropriate mix from both strengths and weaknesses is made in order to formulate a good corporate plan, which can be achieved and fulfilled during its entire plan period.

During these exercises on the corporate plan, all aspects related to the company including its strengths and weaknesses are examined. This exercise includes SWOT analysis.

Now we outline the 'opportunities' and 'threats'.

### **Opportunities:**

The following may be termed as 'Opportunities' which should be timely utilised and availed of by the organisation gainfully:

- Seasonal/climatical demand of products;
- Global markets for the company's products/services (Export opportunities);
- Rural markets to explore and to penetrate;
- To explore the markets in the undeveloped/under-developed/developing states/places;
- To avail of the incentives/concessions declared by Central and State Governments;
- Diversifications opportunities;
- Mergers/acquisition opportunities;
- Good home market available due to boost in the economy;
- Liberalised policies of the Government both at Centre as well as State level for the individual production and industrial developments.

Similar to opportunities, there may be threats too prevailing from time to time, which must be examined and necessary action taken to be free from these or to solve these prudently so that loss to the organisation may be minimum. The probable threats, which may arise or be faced by the organisation, are listed out as under:

### **Threats:**

- Globalisation;
- Competition;
- Price cutting war;
- Free imports;



- Industrial unrest;
- Political instability;
- Quality thrusts;
- High and adverse debt equity ratio;
- Increase in financing cost;
- Economic slow down due to international recession impact

In the above Para, details of:

- Strengths;
- Weaknesses;
- Opportunities;

## **Threats**

Each and every factor of the SWOT would be analysed critically to find out a best alternative out of various alternatives available.

## **Target Selling Strategy:**

Selling, in the old days, was largely an act of personal heroism. The key to successful selling knew the products and the customers. The implications of selling strategy of any business organisation can be grasped from the organisation's target selling strategy. The effective sales rep would present his or her product or service in the best possible light, forge a bond with the buyer, and triumph over the competition. It has relevance to the selection of target market and the customer group.

Today's customers don't want products; they demand solutions, and solutions don't come in a box. They must be designed, fashioned to meet the customer's specific needs.

Making such sales takes a lot more than personal charisma. Today's selling is system selling, solution selling, consultative selling; it entails analysing customer needs, designing alternative solutions, scrutinising costs, developing and implementing systems, and more. This is not the work of heroic individual sales rep. Modern selling is a team sport, and a complex one at that. Winning at it takes discipline and structure.

In today's economy, big and small businesses are seeking every opportunity to win sales through competitive advantages. Smart owners of small business know a sales strategy can create a competitive advantage. Selling consists of two main functions: tactics and strategy. Sales strategy is the planning of sales activities: methods of reaching clients, competitive differences and resources available. Tactics involves the day-to-day selling: prospecting, sales process, and follow-up. The tactics of selling are very important but equally vital is the strategy of sales. The advantages are too compelling to ignore.

Marketing is an important function that plays a vital role in the running of the business. If the product is not marketed in the right manner and fails to reach the end customer, the business will fail. This is why, marketing strategies play crucial roles. While marketing a product, the



company has to decide a target market. Target market is nothing but that specific set of audience to whom the product manufactured is meant to cater to. Target market is more like dividing the vast sea of customers into smaller segments and using the 4Ps of marketing (Product, Price, Place and Promotion) on this segment effectively to achieve maximum sales and profits. Target marketing strategy helps tap that subset of the customer population that are most likely to purchase and use the product. Target market selection is an integral part of marketing strategy development. However, the process of market segmentation opens up several market segments with a lot of potential, opportunities and profitability, and risks too. The organisation may not be keen on all the segments. There may be segments requiring large investments for developing market and promoting sales, there may be segments showing quick return on investments and good profits within a short span of time; again, there may be segments showing lot of opportunities but threat of entry or tough barriers to entry may have to be overcome. Thus, it is a strategic decision for sales and marketing as to which segment(s) the organisation should select for its target market for target selling strategy.

Target market, unlike mass marketing does not dole out a single product to the entire market, instead marks out a specific range of people to whom the product must be effectively marketed to. As a marketing professional one needs to identify the target market correctly and tap as much profit as possible. To identify the target market one will have to look at the product being manufactured and sold. Ask a few questions such as what does this product do? Whom is it helpful to? Which regions of the world will accept this product, etc?

Target selling strategy includes all aspects of sales planning, the size of the sales forces, organisation's personal selling objectives, probable and known sales territories, sales forecasting, sales programming, etc. Target selling strategy of the organisation should clearly define and express in clear terms the target for a given period of time, i.e., short-term strategy in line with its long-term sales and marketing strategy. Sales targets for different segments of the sales-force for different sales territories are required to be fixed in consideration of the extent of competition, demand and supply position, quality and price of the product/service in relation to other competitors, goodwill and image in the market and the overall strategy in managing the sales-force.

Target selling strategy needs to be formulated using various reliable techniques such as demand forecasting, survey method, statistical method, jury method, Delphi method, sales-force composite method, user expectation method, market share method, simple projection methods, extrapolation methods, moving average methods, exponential smoothing, time series analysis, regression analysis and econometric models together with Market Information System (MIS). Market Information Systems (otherwise known as Market Intelligence Systems, Market Information Services or MIS,) are information systems used in gathering, analysing and disseminating information about prices and other information relevant to products. Market Information Systems play an important role in agro-industrialisation and food supply chains.

#### **Formulation and implementation of target selling strategy: Steps**

- To describe the company's unique selling proposition (USP);
- To define the target market;
- To write down the benefits of the company's products or services;



- 
- To describe how you will position your products or services;
  - To define the marketing methods;
  - To advertise;
  - To use Internet marketing, direct marketing, or public relations.

**Other Important Considerations:**

- Sales projection and target selling;
- Proper market coverage; market survey, market research;
- Activity quotas of different wings;
- Creating the sales force and effective deployment;
- Induction training and development of sales-force;
- Good compensation and incentive plans for sales personnel;
- Motivating sales personnel;
- Apprising sales force of sales strategy;
- Objective evaluation of sales figures;
- Formulating sales policies;
- Designing sales territories;
- Morale building and sales supervision;
- Selling norms for sales calls;
- Managing key customer accounts and efficient customer service;
- Recognition and reward for contribution in selling;
- Feedback and communication;
- Getting information on competitor strategy;
- Statistics on past performance.

Information on competitors' strategy regarding target and strategy for capturing market share, pricing models, service strategy, payment terms, trade discounts, advertising strategy, distribution network are all to be assessed and evaluated to counteract in selling the target selling strategy.

A sales forecast is the basic foundation of target selling strategy. Detailed market knowledge and existence of a comprehensive information system are very much essential for formulation and finalisation of target selling strategy. Development of sales forecasts on product, segment, customer and geographical area basis help a firm to keep sales on target. This leads to establishment of quantitative goals relating to an identified sales unit for a specific period of time. The sales target so set, facilitate the carving of profitable sales territories and their management in the most productive manner.



## Strategies for Stagnation versus Growth:

A common problem in many public and private sector organisations is the stagnation of strategic planning after four or five planning cycles. At this stage of development strategic planning is maturing as a management discipline; however, as corporations grow accustomed to formal planning's concepts and techniques, there often evolves an attitude of complacency among top management that, if left unchecked, can undermine planning's essential value.

Essentially, a good organisational strategy must consider both the structure and the overall approach to the performance of an organisation. In the past the traditional approach to organisational structure meant a strict adherence to the hierarchy and a top-down approach to organisational strategy. This approach has led to considerable bureaucracy as all communications were passed down from the top with little feedback and involvement of the employees or line management in the decision making process. Over time this strategy promoted stagnation in the organisation and miscommunication as ideas, reports and meaning were often lost through the chain of command without the more direct collaborative involvement of employees.

### The main reasons for stagnation are:

- Competition
- Total economic recession
- International economic slow down situation
- Globalisation and it's adverse impacts
- Free imports and hence affecting the growth of the home industries.

No product market can grow indefinitely. In the analysis of product life-cycle it is observed that any product may go through different stages – pioneering stage, growth stage, maturity stage, stability and decline stage. With the rapid growth of technology, new inventions and innovations have been changing the market and the customers' choice. Old products are being replaced with new ones. Further, more and more competitive organisations are entering the market. The numbers are increasing day by day. The demand for a product shrinks due to new and functionally better products becoming available in the market or the market becoming apathetic to the product. Technology is a major stimulus for change and has become synonymous with economic progress. Mankind has made quantum leaps in the living standards and economic levels with the advancement of science and civilisation. This will surely lead to stagnation of old and traditional products and styles of business. There will not be any future growth without change. The pay-off is cash that cannot be adequate for reinvestment in that product or business without modifications. The product portfolio strategy utilises both product life cycle theory and diversification for growth.

The initiative for corporate growth is the solution to the problem of stagnation in a business organisation.

Growth strategies are designed to expand an organisation's performance, usually as measured by sales, profits, product mix, market coverage, market share, or other accounting and market-based variables. Typical growth strategies involve one or more of the following:

With a concentration strategy the firm attempts to achieve greater market penetration by becoming highly efficient at servicing it's market with a limited product line (e.g., McDonalds in fast foods).



By using a vertical integration strategy, the firm attempts to expand the scope of its current operations by undertaking business activities formerly performed by one of its suppliers (backward integration) or by undertaking business activities performed by a business in its channel of distribution (forward integration).

A diversification strategy entails moving into different markets or adding different products to its mix. If the products or markets are related to existing product or service offerings, the strategy is called concentric diversification. If expansion is into products or services unrelated to the firm's existing business, the diversification is called conglomerate diversification.

Strategies may lead to demotivation while drive for growth must create enthusiasm throughout the organisation. Natural resources which were earlier considered infinite are actually in limited supply. Utilisation of these natural resources at the current rate will result in their total depletion at some point in future. Unaccounted costs of industrial production in terms of environmental pollution are rapidly increasing, sometimes at rates faster than the growth in such production. These costs which were hidden and invisible have recently been identified and recognised and have made growth of industries uneconomical.

The analysts proposed that the corporate authorities should drop the idea of growth and contribute, instead, to the concept of 'No growth society'.

However, corporate growth will remain a central objective of business organisation. An organisation may try to develop growth strategies for expansion and extension of business network through diversification, acquisition, mergers, joint ventures and/or globalisation of business network.

It is very clear that growth is, and will continue to be, a desired end of business organisations. This is also necessary for the society as it will create productive employment potentialities and help in solving the unemployment problem too.

### **Strategies for growth through expansion versus diversification:**

An organisation that wants to raise its level of performance may adopt what is called the 'Growth Strategy'. An organisation substantially broadens the scope of one or more of its business in terms of their respective customer group, customer functions and alternative technologies to improve its overall performance.

Businesses grow for a number of reasons including to take advantage of a gap in the market, to gain a competitive advantage over rivals, and to win increased market share. There are two main types of business growth:

1. Internal or organic growth.
2. External growth involving merger and acquisition.

Internal growth is typically a slower process, and can be financed by asking shareholders to contribute more capital, or by ploughing back profits into the business. The main disadvantage of such an approach is that it takes time, and in the meantime rivals may be expanding and gaining competitive advantage. However, the main advantage is that the business is able to maintain a healthy gearing position. Because it is not building up external debts (requiring



interest repayments) it is better placed to maintain solvent growth. In addition ownership and control of the business is more likely to be retained by the existing shareholders.

External growth can be carried out by seeking external finance, or by merger and acquisition. These approaches tend to rely on bringing external finance into the business in order to fund expansion, and therefore can lead to a deteriorating gearing position.

Merging with another company is a mutual arrangement whereby two companies join together. Typically one company will issue shares in exchange for shares in another company. A take-over occurs when one business acquires a controlling interest in another. Typically this involves purchasing at least 50% of the shares in the company being taken over.

External growth enables fast expansion of a business but there are a number of problems. Where two companies come together, the cultures may be quite different and difficult to match up. In addition there may be disagreements between managers who are used to working with different practices and systems. The business change needs to be handled carefully from the human resource management perspective.

Growth of business, its investment, network, and turnover and profit maximisation constitutes the target of any business organisation. But in a competitive business environment where all organisations will try to grow, the competition will be very intensive. According to Michael Porter, the key to growth—even survival—is to stake out a position that is less vulnerable to attack from head to head opponents, whether established or new, and less vulnerable to erosion from the direction of buyers, suppliers and substitute goods. Establishing such a position can take many forms—solidifying relationships with former customers, differentiating the product either substantively or psychologically through marketing, integrating forward or backward, establishing technological leadership.

Growth of business organisation requires investment in financial, human and technical resources and innovation skills, coupled with the desire to grow more and more. But whatever is to be planned and done will require funds. So, surplus fund generation by way of efficient management of the existing business is of paramount importance. Generating and conserving cash, maximising cash inflow and minimising cash outflow should be the direction for growth of any business organisation by way of expansion or diversification. To achieve this, scientific management of business with professional approach is to be ensured.

Cost reduction, wastage control, inventory control, value analysis, value engineering, budget and budgetary control, strategic marketing and sales of product through appropriate distribution network are some of the tools and techniques in this direction. Growth strategies are significantly convenient in a situation when the entire industry is growing. In such a growing industrial sector, just staying in the field and achieving the normal growth may seem to be successful. But real growth is to be achieved by competition and will be possible provided the organisation can ensure competitive edge and advantage.

There are three classes of strategy, viz.

The methods which may be used to secure the objectives of a growth strategy will depend upon the nature of the company involved; the products which it offers or proposes to offer for sale; the markets in which the products will be sold; the environment within which it operates, and the strengths and creativity of its competitors.



The company may concentrate on improving its existing products or develop new ones. The ease with which either can be done depends on the nature of the existing one(s). Where a company decides to expand through its existing or new markets, the cost of expansion has to be considered. The cost of breaking into the national market, from a localised position offering the advantages of speedy and cheap transportation, may be disastrous: Advertising has to be on a much wider and more expensive scale; branches and agencies have to be set up; and where equipment has to be installed and maintained, additional costs may be heavy. If expansion is sought overseas, each of the points listed above may be even more costly.

Growth may be sought via improved or bigger facilities. Economies of scale are possible in some industries, so operational economies may be gained when larger units can be used. Machines uneconomic at lower volumes may become viable propositions with a higher throughput. Administration costs may be lower per unit at a high level – computers may then be worthwhile; larger loads may be carried by vehicles; and purchasing economies achieved.

The company has a number of miscellaneous ploys open to it. It may adopt a different branding policy which enables it to cash in on its recognised products; it can adopt a new pricing policy which increases turnover, although if profits fall as a consequence then the policy will need to be re-examined. It may expand by mergers, acquisitions, issue new shares or debentures to raise new capital, and it may revalue its assets.

### **Expansion vs. Diversification:**

The growth of any business organisation can be planned and achieved through expansion of the same business by establishing a multi-unit organisation. Setting up business operation units in more and more locations and expanding the marketing network for the same product/service also helps in achieving growth of business. Such growth through expansion depends upon the market condition. If the demand of the product or services goes on increasing more than the supply, then growth by expansion or extension becomes successful.

On the other hand, when a particular business or product or service faces stiff competition or is heading for saturation or stagnation, or into a gradual declining stage, it is desirable to plan for growth through diversification. Diversification can be strategically planned in related areas of existing business or even unrelated areas, depending on the business environment and customer requirements. Diversification may be horizontal or vertical depending on conditions suitable to the organisation. Horizontal diversification includes expansion into new geographic areas with the firms' product line to grow with the existing customers with existing product and by attaching more and more new customers. Vertical diversification or integration refers to the growth with new product or service other than organisations existing line.

ITC, for example has grown through acquisition of India Foils since foils are required for cigarettes. Again, it has diversified into unrelated areas such as hotel industry, packaging, finance and leasing, agro industries. Same is the case with L&T i.e. Larsen & Toubro, starting with engineering industry, has diversified into manufacturing plant and machineries for cement and dairy plants, cement production, computer industry, ECC Construction Group, power generating units, steel plant, heavy earth moving machineries, and so on.

Diversification is usually pursued for growth to retain the competitive advantage of business. If a particular business faces recession, business strategies and investment will be concentrated



more and more in other profitable areas by gradual reduction of investment in the losing areas.

The proverb saying not to put all eggs in one basket holds true. So, when the surplus fund is available for further investment for growth of business, it is to be decided after critically analysing all factors whether growth strategy will be successful by expansion or by diversification. If a particular company enjoys the position of market leader for its product range it may be appropriate to enter into new markets and go for expansion. On the contrary, investment for diversification to design, produce and launch a new product other than the traditional one will be the right strategy in a situation when the market is declining day by day owing to entry of substitute products satisfying customers in a better way.

### **Diversification vs. Core competency:**

Diversification strategies are used to expand firms' operations by adding markets, products, services, or stages of production to the existing business. The purpose of diversification is to allow the company to enter lines of business that are different from current operations. When the new venture is strategically related to the existing lines of business, it is called concentric diversification. Conglomerate diversification occurs when there is no common thread of strategic fit or relationship between the new and old lines of business; the new and old businesses are unrelated.

Diversification is a form of corporate strategy for a company. It seeks to increase profitability through greater sales volume obtained from new products and new markets. Diversification can occur either at the business unit level or at the corporate level. At the business unit level, it is most likely to expand into a new segment of an industry which the business is already in. At the corporate level, it is generally and it is also very interesting entering a promising business outside of the scope of the existing business unit.

Diversification is part of the four main marketing strategies defined by the Product/Market Ansoff matrix.

Diversification is a form of growth strategy. Growth strategies involve a significant increase in performance objectives (usually sales or market share) beyond past levels of performance. Many organisations pursue one or more types of growth strategies. One of the primary reasons is the view held by many investors and executives that "bigger is better". Growth in sales is often used as a measure of performance. Even if profits remain stable or decline, an increase in sales satisfies many people. The assumption is often made that if sales increase, profits will eventually follow.

Rewards for managers are usually greater when a firm is pursuing a growth strategy. Managers are often paid a commission based on sales. The higher the sales level, the larger the compensation received. Recognition and power also accrue to managers of growing companies. They are more frequently invited to speak to professional groups and are more often interviewed and written about by the press than are managers of companies with greater rates of return but slower rates of growth. Thus, growth companies also become better known and may be better able, to attract quality managers.

Growth may also improve the effectiveness of the organisation. Larger companies have a number of advantages over smaller firms operating in more limited markets.



Large size or large market share can lead to economies of scale. Marketing or production synergies may result from more efficient use of sales calls, reduced travel time, reduced changeover time, and longer production runs.

Learning and experience curve effects may produce lower costs as the firm gains experience in producing and distributing its product or service. Experience and large size may also lead to improved layout, gains in labour efficiency, redesign of products or production processes, or larger and more qualified staff departments (e.g., marketing research or research and development).

Lower average unit costs may result from a firm's ability to spread administrative expenses and other overhead costs over a larger unit volume. The more capital intensive a business is, the more important its ability to spread costs across a large volume becomes.

Improved linkages with other stages of production can also result from large size. Better links with suppliers may be attained through large orders, which may produce lower costs (quantity discounts), improved delivery, or custom-made products that would be unaffordable for smaller operations. Links with distribution channels may lower costs by better location of warehouses, more efficient advertising, and shipping efficiencies. The size of the organisation relative to its customers or suppliers influences its bargaining power and its ability to influence price and services provided.

Sharing of information between units of a large firm allows knowledge gained in one business unit to be applied to problems being experienced in another unit. Especially for companies relying heavily on technology, the reduction of R&D costs and the time needed to develop new technology may give larger firms an advantage over smaller, more specialised firms. The more similar the activities are among units, the easier the transfer of information becomes.

Taking advantage of geographic differences is possible for large firms. Especially for multinational firms, differences in wage rates, taxes, energy costs, shipping and freight charges, and trade restrictions influence the costs of business. A large firm can sometimes lower its cost of business by placing multiple plants in locations providing the lowest cost. Smaller firms with only one location must operate within the strengths and weaknesses of its single location.

### **Concentric or Related Diversification:**

This means that there is a technological similarity between the industries, which means that the firm is able to leverage its technical know-how to gain some advantage. For example, a company that manufactures industrial adhesives might decide to diversify into adhesives to be sold via retailers. The technology would be the same but the marketing effort would need to change. It also seems to increase its market share to launch a new product which helps the particular company to earn profit. However, there's one more example, Addition of tomato ketchup and sauce to the existing "Maggi" brand processed items of Food Specialities Ltd. is an example of technological-related concentric diversification. It is when a business adds or expands its existing product lines or markets. For example, a phone company that adds or expands its wireless products and services by purchasing another wireless company is engaging in related diversification. With a related diversification strategy one have the advantage of understanding the business and of knowing what the industry opportunities and threats are; yet a number of related acquisitions fail to provide the benefits or returns originally predicted. It is usually because the diversification analysis under-estimates the cost of some of



the softer issues: change management, integrating two cultures, handling employees – layoffs and terminations, promotions, and even recruitment. And on the other side, the diversification analysis might over-estimate the benefits to be gained in synergies.

Concentric diversification occurs when a firm adds related products or markets. The goal of such diversification is to achieve strategic fit. Strategic fit allows an organisation to achieve synergy. In essence, synergy is the ability of two or more parts of an organisation to achieve greater total effectiveness together than would be experienced if the efforts of the independent parts were summed. Synergy may be achieved by combining firms with complementary marketing, financial, operating, or management efforts. Breweries have been able to achieve marketing synergy through national advertising and distribution. By combining a number of regional breweries into a national network, beer producers have been able to produce and sell more beer than had independent regional breweries.

Financial synergy may be obtained by combining a firm with strong financial resources but limited growth opportunities with a company having great market potential but weak financial resources. For example, debt-ridden companies may seek to acquire firms that are relatively debt-free to increase the lever-aged firm's borrowing capacity. Similarly, firms sometimes attempt to stabilise earnings by diversifying into businesses with different seasonal or cyclical sales patterns.

Strategic fit in operations could result in synergy by the combination of operating units to improve overall efficiency. Combining two units so that duplicate equipment or research and development are eliminated would improve overall efficiency. Quantity discounts through combined ordering would be another possible way to achieve operating synergy. Yet another way to improve efficiency is to diversify into an area that can use by-products from existing operations.

Synergy is an idea that the whole is greater or lesser than the sum of its parts. The organisation enters into a related business so that it can reap the benefits of synergy. The major reasons why organisations adopt concentric diversification strategies are:

- Realising financial synergies in terms of transaction cost savings and tax savings.
- Realising marketing synergies by increased market power (e.g. offering a complete range of products) and multipoint market contact with the distribution channel partners (e.g. using the same retailing outlets) and customers (e.g. users of a range of complementary products).
- Realising operational synergies through economies of scale, i.e., increasing the size of operations and economies of scope, i.e., using a common base of resources and capabilities for operating varied, but related businesses.
- Realising personnel synergies through utilising human resources with common skill sets and competencies for another business.
- Realising informational synergies by using common sources of information, databases and information networks.
- Realising managerial synergies by managing a set of related businesses requiring a common set of administrative skills and experience.



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## **Conglomerate or Unrelated Diversification:**

It is when a business adds new, or unrelated, product lines or markets. For example, the same phone company might decide to go into the television business or into the radio business. This is unrelated diversification: there is no direct fit with the existing business.

Why would a company want to engage in unrelated diversification? Because there may be cost efficiencies. Or the acquisition might provide an offsetting cash flow during a seasonal lull. The driver for this acquisition decision is profit – it needs to be a low risk investment, with high potential for return.

Basic and important reasons for diversifications are:

1. These strategies are adopted to minimise risk by spreading it over several businesses. For example, a company offering seasonal products (e.g. air coolers) may diversify into another range of seasonal products (e.g. water heaters) to complement its product range in a way so as to offset the disadvantages of one set of products with that of the other.
2. It may be used to capitalise on its capabilities and business model so as to maximise organisational strengths or minimise weaknesses. For example, a company having a core competence in the area of after-sales service may establish a specialised agency for offering after-sales services for other manufacturers.
3. It may be the only way out if growth in existing businesses is blocked due to environmental and regulatory factors. For example, a cigarette making company perceiving threats to its business owing to the impact of anti-smoking legislation, growing opposition to smoking and increasing health awareness, may diversify into paper manufacturing.

While related diversification uses the rationale of synergy creation as the basic reason, in the case of unrelated diversification, it is spreading risk over different, unrelated businesses. The stark difference between related and unrelated diversification is therefore in terms of the emphasis placed. The emphasis in related diversification is on operational matters, for reaping the benefits of synergies. The emphasis in unrelated diversification is on financial matters by spreading risks over several different businesses. Conglomerate diversification occurs when a firm diversifies into areas that are unrelated to its current line of business. Synergy may result through the application of management expertise or financial resources, but the primary purpose of conglomerate diversification is improved profitability of the acquiring firm. Little, if any, concern is given to achieving marketing or production synergy with conglomerate diversification.

One of the most common reasons for pursuing a conglomerate growth strategy is that opportunities in a firm's current line of business are limited. Finding an attractive investment opportunity requires the firm to consider alternatives in other types of business. Products, markets, and production technologies of the brewery were quite different from those required to produce cigarettes.

Firms may also pursue a conglomerate diversification strategy as a means of increasing the firm's growth rate. As discussed earlier, growth in sales may make the company more attractive to investors. Growth may also increase the power and prestige of the firm's executives.



Conglomerate growth may be effective if the new area has growth opportunities greater than those available in the existing line of business.

Probably the biggest disadvantage of a conglomerate diversification strategy is the increase in administrative problems associated with operating unrelated businesses. Managers from different divisions may have different backgrounds and may be unable to work together effectively. Competition between strategic business units for resources may entail shifting resources away from one division to another. Such a move may create rivalry and administrative problems between the units.

Caution must also be exercised in entering businesses with seemingly promising opportunities, especially if the management team lacks experience or skill in the new line of business. Without some knowledge of the new industry, a firm may be unable to accurately evaluate the industry's potential. Even if the new business is initially successful, problems will eventually occur. Executives from the conglomerate will have to become involved in the operations of the new enterprise at some point. Without adequate experience or skills (Management Synergy) the new business may become a poor performer.

Without some form of strategic fit, the combined performance of the individual units will probably not exceed the performance of the units operating independently. In fact, combined performance may deteriorate because of controls placed on the individual units by the parent conglomerate. Decision-making may become slower due to longer review periods and complicated reporting systems.

The two principal objectives of diversification are:

- Improving core process execution, and/or
- Enhancing a business unit's structural position.

The fundamental role of diversification is for corporate managers to create value for stockholders in ways stockholders cannot do better for themselves. The additional value is created through synergetic integration of a new business into the existing one thereby increasing its competitive advantage.

Core competencies are the most significant value creating skills within your corporation and key areas of expertise which are distinctive to your company and critical to the company's long term growth.

Company's core competencies are the things that you can do better than your competitors in the critical, central areas of your company where the most value is added to your products. These areas of expertise may be in any area from product development to employee dedication.

A competence which is central to your business's operations but which is not exceptional in some way should not be considered as a core competence, as it will not generate a differentiated advantage over rival businesses. It follows from the concept of Core Competencies that resources that are standardised or easily available will not enable a business to achieve a competitive advantage over rivals.

On the basis of its resources and behaviour, an organisation develops certain strengths and weaknesses which when combined lead to synergistic effects. Such effects manifest themselves



in terms of organisational competencies. Competencies are special qualities possessed by an organisation that make them withstand the pressures of competition in the marketplace. In other words, the net results of the strategic advantages and disadvantages that exist for an organisation determines its ability to compete with its rivals. Other terms frequently used as being synonymous to competencies are unique resources, core capabilities, invisible assets, embedded knowledge, etc.

When an organisation develops its competencies over a period of time and hones them into a fine art of competing with its rivals, it tends to use these competencies exceedingly well. The capability to use the competencies exceedingly well turns them into core competencies.

When a specific ability is possessed by a particular organisation exclusively or relatively in large measure, it is called a distinctive competence.

Many organisations achieve strategic success by building distinctive competencies around the critical success factors. Recall that critical success factors are those which are crucial for organisational success.

A few examples of distinctive competencies are given below.

- Superior product quality on a particular attributes, say, a two-wheeler, which is more fuel efficient than its competitor products.
- Creation of a marketing niche by supplying highly specialised products to a particular market segment.
- Differential advantage based on superior research and development skills of an organisation, not possessed by its competitors.
- Access to a low-cost financial source, like equity shareholders, not available to its competitors.

A distinctive competence is 'any advantage a company has over its competitors because it can do something which they cannot or it can do something better than they can. It is not necessary, of course, for all organisations to possess a distinctive competence. Neither do all organisations, which possess certain distinctive competencies, use them for strategic purposes. Nevertheless, the concept of distinctive competence is useful for the purpose of strategy formulation. The importance of distinctive competence to strategy formulation rests with 'the unique capability it gives an organisation in capitalising upon a particular opportunity; the competitive edge it may give a firm in the market place; and the potential for building a distinctive competence and making it the cornerstone of strategy'.

### **Distinctive capability:**

Where a company competed used to determine business success. As markets fragment and proliferate, as mass customisation becomes more prevalent, so dominating a market segment is more difficult and less rewarding. Shortening product life cycles and totally new technical advances mean that rapid product innovation and commercialisation are more important than just having leading products, since they will be ephemeral.

How a company competes is now the crucial strategic consideration. Distinctive capability is an execution goal. It is primarily about behaviours. The goal is to identify and develop hard-to-



imitate organisational capabilities that lead to the delivery of products and services that distinguish a company from its competitors in the eyes of customers.

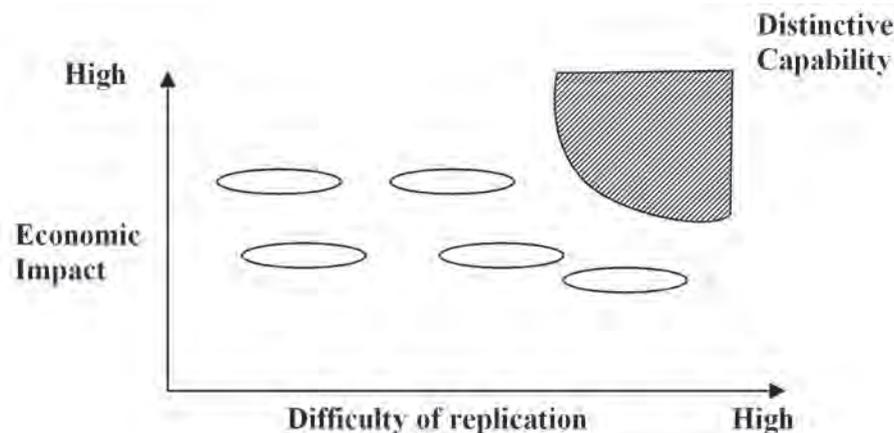
### Characteristics of Distinctive Capability:

Distinctive capability is the key to effective strategic planning. It represents a set of unique capabilities or competencies that have a special value to the customer base. In this sense, the strategy hinges on a capability that is ingrained and central to the organisation and that enables it to deliver products or services that outperform competitors in meeting customer needs. This capability becomes the foundation of the organisation's business success.

The distinctive capability goal must look forward for a number of years because, along with the cultural aspects of the people goal, it is the hardest to change and will take the longest to achieve.

Distinctive capability can be many things, but often it is the 'fit' of the entire strategy, organisation structure and approach to business. Individual features are easy to copy; an entire business is very difficult even when competitors know what their capability is.

The key attributes of distinctive capability are that it has a long-term financial impact and is difficult for competitors to replicate. It is depicted in following Figure.



Distinctive capability is normally developed from the business model. However this is an iterative process and some techniques can help in clarifying the leadership team's thinking on the company's distinctive capability.

The distinctive capability development model seeks to identify the greatest source of the company's strength. The distinctive capability goal answers the question 'What business or organisational capability does the company have which it will be able to develop further than any competitor in the next three to six years and will create a major, sustainable competitive advantage?'

The distinctive capability development model provides a starting point from which to develop the goal. It proposes that there are five approaches to creating a distinctive capability in serving customer needs. These approaches are not mutually exclusive, but in the initial review the focus should be on one or two areas. The complete model is shown in the table below:



Example	Distinctive capability / approach	Factors
Sony	Innovation	Ideas development Commercialisation
Wal-Mart Dell Computer Corporation Nissan	Operations	Tight controls Efficient scheduling Flexibility High quality Unique processes Purchasing
Coca-Cola IBM BMW Philip Morris Nike	Sales and marketing	Advertising brand management Salesforce ability Salesforce management Technical literature Promotion
Wal-Mart Dell Computer Corporation	Distribution	Controlled channels Bulk transport Logistics systems High utilisation Cluster markets Tight controls Piggy-backing
American Express Marriott Hotels	Service	Focused service on customer needs Individualised service Skilled operators Fast response Spares availability Excellent administration Replace faulty products or services

**Table: The distinctive capability development model**

### **Innovation:**

The innovation approach concentrates on excelling at introducing new and successful products and services to the market as a recognised part of the company's strategy.

Sony is a good example of such an approach. It has a string of innovative new products, from the transistor radio to the Sony Walkman. It's record of introducing new products successfully to the market is first rate. Generally speaking it does not seek to compete on price, but on new and differentiated products. It's key capability is in miniaturisation that allows it to make everything from the Sony Walkman through video cameras to notebook computers.

Innovation is not just about the big breakthrough, the new penicillin, but also about a process of continuous improvement, market segmentation and development. For instance, tea bags were a major innovation: no mess, no tea strainer. They became the dominant form of selling domestic tea. It was a major change, a big innovation. Now the market is being further segmented by the



introduction of one-cup tea bags, special tea bags for those who make their tea in a cup rather than a pot. The product has special perforations in the bag to help the fusion process and has a specially formulated blend. The production process is only minimally different from that which produces ordinary tea bags, but this is nevertheless innovation. It is a new idea for a product, based on observation of the market, researched, developed, marketed and profitable.

Hence a process of continuous, successful, but perhaps incremental innovation can represent a distinctive capability. Equally, the capability can be in the generation of ideas, either for totally new products or services or for extending existing products to create new niche markets.

One of the base data forms is the innovation form. This gives a rough measure of the rate of innovation in the company. Innovative companies will have a high percentage of their new products or services as top-selling lines in their range.

The innovating company is recognised by both its high rate of introducing new products and services and the short timescale within which they are developed and successfully launched. It can also be a company that can continuously modify, change and improve its existing products to meet new opportunities in the market.

### **Operations:**

Operations and purchasing can provide distinctive capability through enabling the company to:

- be the lowest cost producer;
- be the highest quality producer ;
- be the most flexible producer;
- exploit unique (patented) processes;
- use efficient controls;
- have access to cheap supplies or scarce resources

This is an important area for companies whose products are considered commodities, or for those service organisations that sell labour, such as office cleaning or car valeting. It is also important for banks, supermarkets, oil distribution companies and so on. Generally, where the gross margin percentage is low, operations and purchasing are important, and will often be a key part of the distinctive capability goal.

### **Sales and marketing:**

Think of big international companies who are excellent at marketing and sales – Coca Cola, Philip Morris (Marlboro), Nike and IBM and generally you will find a profitable organisation. Effective marketing and selling organisations often have a high gross margin percentage.

Many medium-sized companies lack professional marketing people at board level and believe they cannot afford to spend heavily on promotions and sales training. For those companies that can afford to invest in marketing, and develop the marketing Junction as they grow, there can be excellent returns.



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### **Distribution:**

Some companies base their distinctive capability on distribution. Fashion retailers Benetton, for example, have built their market share through controlling their own retail outlets. This cuts down the number of locations from which their products can be bought, but guarantees that recognised outlets for their merchandise exist.

Controlling their own distribution gives them other advantages. One of the critical success factors in the fashion business is to be able to spot winning designs quickly and rush supplies to the market, at the same time stopping production of slower moving items. Each Benetton store has a point-of-sale system that tells the factory those items that are selling and those that are not. By combining this information with flexible manufacturing, Benetton is able to deliver a garment three weeks after the store places an order even if it is not in stock in the warehouse.

Besides controlled distribution channels, economies such as bulk distribution, clustering outlets close together to reduce transport, or piggy-backing on other products so that most of the costs are carried by another supplier, are all means of obtaining low-cost distribution or high distribution frequency.

### **Service:**

Service is becoming the key to many companies' success. The concept of customer care or customer service, giving customers more attention than they expect or would receive from the competition, is becoming one way of differentiating the company.

As society becomes more reliant on technology, so it requires greater reliability and faster repairs when something does break down.

Computer giant IBM built its business on marketing and service. Customers, and the service the company gives them, are at the heart of its business philosophy. Together with other companies who put service at the heart of their organisation, IBM can obtain premium pricing for its products.

Efficient administration issuing of correct invoices and well presented letters are all indications of high service levels. Companies who cannot only provide high service in their core activities but also in their support functions will be perceived as excellent by their customers.

### **Distinctive Capability and Business Processes:**

Start with the area that gives the greatest competitive advantage. Explore how linking with other processes can expand that area into a distinctive capability. Link these processes together so that they form a unique strategic capability that delivers superior value to the customer. This becomes the focus of the strategy. The total fit of all the elements is defined in the business model. The distinctive capability is created by making investments in support infrastructure that creates a capability that is greater than the sum of its parts. Distinctive capability begins and ends with the customer. It begins by identifying their needs and ends by satisfying them.



## PART-C

### Major Contents of Part C:

- Acquisition and merger strategy
- Strategy of joint venture both in India and abroad

### Acquisition and Merger Strategy:

In recent years the tendency to grow through acquisition has assumed enormous significance in the business world. Acquisition ranging from licensing to purchase of another firm has come to be recognised as better means to accomplish growth and profitability objectives of the company than internal development which may involve addition of new products or major organisational changes to provide for new skills and completeness. Financial, risk and timing are some of the major factors that favour the move for acquisition instead of internal development. Growth by way of internal development entails start-up costs on product development and introduction, and acquisition of new facilities and skills. These costs may be less if a company acquires another. However, it is argued that acquisition pays for the start-up costs as well as premiums as a compensation for the risks assumed by the seller in developing the property and the competences being sold. This makes acquisition costlier than internal development. However, this is not necessarily the case in risky issues. In such a case, the company might take over another enterprise by an exchange of stock and not worry for poor public response to security issues.

Acquisition is not a simple task. It has to be carried out with extreme care on a planned basis by a task force created in the form of a large and complete department equipped with functional specialists. If this is not done properly there will be a dip in the performance of the organisation resulting in a downward share price spiral.

### Reasons for M & A:

There are a number of reasons for or advantages of M&A.

### M&A and Growth-Gap Filling:

One important objective of M&A is to fill the growth-gap, i.e., the gap between the company's sales potential and its current actual performance. The four important components of growth-gap are the following.

1. Product Line Gap
2. Distribution Gap
3. Usage Gap
4. Competitive Gap

Theories are a number of theories of mergers and other forms of asset redeployment. They seek to explain the reasons for/benefits of mergers and other forms of asset redeployment. Weston et. al. have categorised these theories as shown in the following table.



1. Efficiency Theories:
  - Differential managerial efficiency
  - Inefficient management
  - Operating Synergy
  - Pure diversification
  - Strategic realignment to changing environment
2. Agency problems and managerialism
3. Market power
4. Taxes
5. Redistribution

Operating economies of scale is the desire to protect the interests of the managers and employees who are at greater risk if the single industry in which attempt to adapt to the changing environment makes the response quick and is believed to be less risky fraction of the ownership shares of a firm. Tax effects are also advocated as an important reason for mergers. According to the redistribution hypothesis, M&A increases value to shareholders at the expense of other stakeholders in the firm, like bondholders, government (in the case of tax savings) and organised labour.

#### **Management of M&A:**

Management of M&A involves the following important phases.

1. Determination of the strategic of M&A.
2. Screening, evaluation and choice of candidates for M&A.
3. Determination of acquisition strategy.
4. Post-acquisition integration.

The first important step in the management of M&A is the determination of the strategic purpose of merger/acquisition. Is the objective to gain an entry into the market? Is it to strengthen the competitive position or to gain market leadership? Is it to acquire technology? Is it for achieving economies of scale or advantages of synergy? Is it to deepen/ or widen product mix? Is it to strengthen the distribution in bound or outbound logistics?

#### **Strategic Considerations in M&A:**

1. Fit with Mission and Strategy
2. Fit with Portfolio Strategy
3. Competitive Impact
4. Scale Economies and Synergy
5. Pre-emptive Motive
6. Comparison with establishment of New Unit



7. Long-term Financial Considerations
8. Tax Shields
9. Strengthening Ownership Control and Guarding against Acquisition

**Screening, Evaluation and Choice:**

Having considered the strategic issues and determined the strategic purpose of acquisition, a company can move on to the next stage, that is choice of the eligible candidate for acquisition. This involves a screening and evaluation of the possible firms. The purpose of screening is to eliminate firms which do not satisfy certain set criteria. For example, firms above a certain size in value, or firms which are too small, may not suit the resources or purpose of the company. Other criteria used at the screening stage may involve market share, product mix, market coverage, international business etc. Screening facilitates short listing of companies for detailed analysis.

Important criteria used for evaluation include the following:

1. Earnings Potential
2. Value of Company
3. Market Position
4. Capital requirement
5. Condition of Plant and Machinery
6. Quality of Management Team
7. Human Resources

Broadly speaking, acquisition strategy should be developed along the following lines:

**Laying Down Objectives and Criteria:**

Any company embarking upon a strategy of expansion through an acquisition policy must lay down acquisition objectives and criteria. These criteria sum up the acquisition requirements including the type of organisation to be acquired and the type of efforts required in the process. Laying down the corporate objectives and the acquisition criteria ensure that resources are not dissipated on an acquisition when these might more profitably be used to expand existing business activities.

**Assessing Corporate Competence:**

A detailed study of the company's own capabilities should form an integral part of acquisition planning. Such a study is done to make sure that it possesses the necessary competence to carry out the acquisition programme successfully. Once the corporate strengths have been underpinned the management should appoint an ad hoc task force with a member of the top management team to head this body and functional executives as its members to carry out the pre-acquisition analysis, negotiate with the prospective firm, integrate the companies and monitor acquisition results.



### Locating Companies to Acquire:

With carefully spelt out acquisition objectives, strategies and screening criteria, a company may not face any problem in finding the right organisation. For performing this task, the acquiring company must take into consideration economic, legal and other factors. For instance, it may be useful to ascertain what the potential firm can do for the organisation which it can not do on its own, what the organisation can do for the potential firm which it can not do itself, what direct and tangible benefits or improvements result from acquiring the potential firm and what is the intangible value of these savings to the organisation. In the same vein, legal procedures involved in acquisition must be gone through in detail. Managerial implication of takeover strategy should also be examined.

An enormous amount of information pertaining to the above aspects gathered over a period of time is indispensable to a company with an active continuous acquisition programme. The desired information collected in conjunction with banks, financial institutions, stock brokers and consultants help in locating particular concerns which might fit the needs of the acquiring company.

In the present business scenario, acquisition and merger option has been very popular. A merger refers to a process in which two companies become one by coming together. In such a case, no one company rules over the other. Usually the management of both companies shares the control of the resultant company and names of both companies are retained for the resulting companies. There are many high profile examples of mergers, Hero Honda (the leading motorcycle brand in India), Sony Ericsson (the third largest manufacturer of mobile phones in the world) and many others. In each of these cases, names of both companies were retained in order to leverage the equity of both brand names. Therefore simply put, mergers create a new organisation out of two or more organisations of more or less equal stature, pooling all resources.

**Acquisition:** Acquisitions refers to processes in which one company buys the other company. In such a situation the buying company absorbs the bought company into the existing company. Acquisitions can be carried out either to eliminate competition by absorbing the competing company or to expand the corporate portfolio by retaining the acquired company as an independent entity under the overall corporate management.

**Joint Venture:** Joint Venture is an approach in which two or more companies agree to pool their resources together to form a combined force in the marketplace. Unlike a merger, a joint venture does not involve the emergence of a new combined entity. Each participant in the joint venture retains their individual entity but choose to compete against competitors as a unified business force. Joint venture is a very popular form of a joint venture. Recently, the world's largest retailer Wal-Mart entered into a joint venture with India's Bharti Enterprises to get a toe hold in the booming Indian retail market. This move was the only way Wal-Mart could have entered the Indian market as regulatory restrictions prohibit a full owned foreign retail chain to operate in the Indian market. As such, this joint venture was a market entry strategy for Wal-Mart. Therefore joint ventures are indeed a very common entry strategy for companies. This approach has it's own pros and cons. The obvious advantage is that companies entering markets through JVs would benefit from the local knowledge of the local company. The obvious disadvantage is that companies entering new markets may be taken for a ride



if joint ventures are not agreed upon carefully. As such, defined simply, Joint Ventures are less risky than acquisitions because they are negotiable, co-operative and easier to walk away from. They bring two firms together with mutual interests but different strengths to work on particular projects that offer benefit to both.

Once the implications are understood, companies will have to consider three key factors that influence the selection among the approaches, which will offer a strategic context for companies to evaluate the three approaches:

- 1. Level of competition in the market:** It is one of the fundamental reasons that companies engage in either M&A or a joint venture is to tackle competition in any market. Companies around the world have to come to believe that consolidation with a market would allow them proportionate market presence and power to claim the leadership position. Further, with immense pressure on companies to cut costs and post profits, acquisitions offer a channel to increase scale and leverage the sheer size of the resulting organisation. As such, depending on how competitive the market is in any particular sector, companies will have to decide between the three options. Airline industry in India is one of the most competitive industries. As such, companies have resorted to intense acquisition as consolidation reduces costs, increase occupancy rates, and enhances the underlying profitability. On the contrary, consumer electronics is an industry where due to the highly specialised nature of work, companies prefer collaboration or joint ventures. Therefore a Samsung works with Sony, a Sony works with Ericsson, Intel works with IBM and so on. These strategic joint ventures allow companies to leverage each others core competencies.
- 2. Barriers to entry:** M&A are usually resorted to either for increasing scale or cutting costs and joint ventures are preferred to enter new markets or segments. As such, one of the important factors which should be considered is the level of barriers present for entering a new market. Some markets are characterised by high barriers to entry such as regulatory constraints, established competitors, highly volatile markets that does not justify initial entry investments and so on. In such cases, joint ventures are the preferred option as they allow companies to leverage the existing knowledge and resources through collaboration. On the other hand, where barriers to entry are low, companies can gain a very strong foot hold in the market either through mergers or through acquisitions.
- 3. Synergies and resources:** Along with the previous two factors, synergies and resources are equally important in deciding among the three options available to companies. Mergers and joint ventures between companies have been proven to work efficiently if there is a high level of synergy between companies that come together. Synergies can be in the corporate culture, product portfolio, strategic goals, and supply chain or logistic systems. When such synergies exist, companies can productively implement the purpose of a merger or a joint venture. Similarly, for an acquisition option, an important factor is the availability of financial resources. As acquisitions take place at prices much higher than the book values of the companies being acquired, acquiring companies should possess or have access to considerable resources.

Mergers, acquisitions and joint ventures are all equally powerful corporate growth strategies available for companies. The selection of any single approach depends on both internal and external factors. Given the many successes and failures alike experienced by companies



worldwide, it would be advisable for companies to primarily understand the strategic implications of each approach and then to diligently evaluate each approach in light of the above mentioned factors.

There are three different strategies of joint venture.

- (i) **Spider-Web strategy:** A small firm establishes a series of joint ventures so that it can survive and is not swallowed by its large competitors. For example, an oil firm jointly bidding for drilling rights along with five or six other firms. It does not have enough funds to bid on its own or it does not wish to spread resources to increase the rate of success or to reduce the chance of being taken over.
- (ii) **Together- Split strategy:** In this strategy, the firms agree to a joint venture for a specific product line or for a specific length of time. When the project is completed, they split, e.g., many construction projects. This strategy can also evolve when the two partners have grown to the point where they do not need each other for economies of scale or efficiency-related reasons.
- (iii) **Successive Integration Strategy:** In this strategy, a firm begins a relationship which is not that strong and then develop several joint ventures which can lead to a merger. In fact, a joint venture can be a pilot project prior to a full-fledged merger.

The Spider-Web Strategy makes sense for small companies or for large, undiversified firms organised into an oligopoly, Together- Split Strategy makes sense for firms that prefer independence but are financially unable to go alone. Successive Integration Strategy is chosen by firms whose managements are risk-averse type regarding merger but uses joint ventures to test the water.

### **Strategy for Joint Ventures in India and Abroad:**

Mergers and acquisition (M&As) have played a great role in the transformation of the industrial structure of the advanced economies. It is pointed out that about two-thirds of the large public corporations in the U.S.A. have had at least one case of merger in their history and that the acquisition oriented conglomerates experienced super fast growth in sales, profits and assets. Mergers represent resource allocation and reallocation processes in the economy with firms responding to new investment and profit opportunities arising out of changes in economic conditions and technological innovations impacting industries. While the first wave of M&As represented mostly horizontal mergers, the second wave predominated by vertical (both forward and backward) integration.

Many organisations have entered into joint venture mostly in India with foreign partners. Even many new companies have been created as joint venture companies with foreign share holdings. Shareholdings by the foreign partners vary upto 50% and beyond, depending upon the M.O.U. (Memorandum of Understanding) between the two organisations.

Joint venture companies are created for:

- New technologies
- Foreign direct investments



- Management expertise
- Consultancy services in specialised areas as well as projects
- Information technology.

Joint venture formation has both legal and organisational issues to be examined and sorted out as this involves foreign direct investments including technology agreement transfers. Similar to joint venture companies in India, there are joint venture companies in the foreign countries also.

This is an important strategic decision, as this will open many issues of differences in future regarding:

- Ownership
- Management control
- Appointment of chief executive and directors in the board of directors of the joint venture company.

Keeping these points in view, a strategic decision is taken by the organisation for its survival and growth.

The benefits of a successful acquisition are powerful, offering as they do dominant market shares, the strength of sheer size, and unique competitive advantages. But just how does the attacker know beforehand whether the acquisition he's targeting will be worth the price he has to pay? The swelling of the M&A wave has created a critical historical juncture, when this question must be answered if the entire process of restructuring through acquisitions and sell-outs is to generate real benefits for the participants. As the mode it has constructed contends, the key issue is to weave M&A into corporate strategy instead of pursuing it opportunistically. In other words, the acquisition must enable to achieve the same objectives as intended to with strategies. Only then post acquisition corporation go on to create more value than that of its parts.

Indian companies have started setting up joint ventures with foreign companies. In automobiles, engineering, electronics, computers, steel, food industries, more and more joint ventures are being set up. To have state-of-the-art technical know-how, the Indian companies are more eager to form joint ventures with technically sound and superior foreign companies. In certain cases, government organisations are joining hands with private companies and also foreign companies to set up joint ventures.

For example, in the power sector in West Bengal, a joint venture company has been formed by West Bengal Power Development Corporation Ltd (WBPDC) with Development Consultants Ltd (DCL) and their foreign associates.

Similarly, a large number of joint ventures-are coming up in different states in different industrial sectors. So, in spite of having competitive business conflict, many companies successfully diversify and grow through joint ventures.

When the projects are large scale, technology expensive, and the cost of failure too large to be borne alone, joint venturing becomes a preferable route. The joint venture approach presents



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new opportunities in an era of globalisation with risks that can be shared jointly with collective resources. However, joint ventures often limit partner discretion, control and profit potential. Increasing nationalism in many foreign markets may need more consideration of the joint venture approach if a company desires to diversify and grow globally.

In recent years, it has become more appealing for domestic companies to join foreign business through joint ventures. India is a good example. After announcement of liberalised policy in July 1991 together with the globalisation of Indian economy, the rationale is that joint ventures minimise the threat of foreign domination and improve the product, process, technology, skills, employment, growth and financial position of the local business.

The cement industry is witnessing a process of consolidation, whereby fewer players controlling larger capacities are likely to emerge. Financially weak and/or marginal players are seeking to sell their facilities to their stronger counterparts.

This can be seen in the sale of Modi Cement's facilities in MP to Gujarat Ambuja; the sale of Digvijay Cement's facilities in Gujarat to Grasim Industries, and India Cement's takeover of Visaka Cements. In the long term, Indian Industries appear to be moving towards acquiring a structure similar to the international market which is controlled by a few large players, operating within an environment of generally accepted 'normal profits'.



## PART-D

### Major Contents of Part D:

- Marketing strategy as a part of corporate strategy – Developing the Product/ Service – Selecting the Target Market – Assembling the Marketing Mix
- Growth under inflation and protection of Shareholders' Real Capital.

### Marketing strategy as a part of corporate strategy:

Marketing strategy is a well-outlined game plan which is the fundamental strategy based on which all activities of the organisation are decided. Marketing strategy broadly comprises three main steps:

- (i) Developing the product/service
- (ii) Selecting the target market
- (iii) Assembling the marketing mix

### Developing the Product/Service:

Organisations are increasingly recognising the necessity and advantages of regularly developing new products and services, especially in view of changing tastes, technologies and competition. Every product goes through a lifecycle – it is conceived and born, developed through phases, and eventually dies as younger products come in the market. The product lifecycle presents companies with two major challenges. First, since all products eventually decline, the company must develop a process for finding new products or services to replace old ones. Secondly, the company must understand how its products pass through different lifecycle stages. Some companies concentrate on managing current products/services and fail to develop new products to their own detriment. Companies need to strike a balance between these two extremes.

Every company needs a product development programme. A company may develop new products in two ways –

1. Through the efforts of its own R&D and experimentation programmes.
2. Through acquisition of a new company, buying a plant or a license to produce someone else's product/brand.

Product development usually involves eight stages, viz. –

- (i) Idea generation
- (ii) Idea screening
- (iii) Concept development and testing
- (iv) Marketing strategy development



- (v) Business analysis
- (vi) Product development
- (vii) Market testing
- (viii) Commercialisation

### **Selecting the Target Market:**

The process of market segmentation opens up several new market segments with varying potential, profitability and risks. A company may not be interested in all the segments. There may be segments assuring quick returns on investment, i.e., early profits, these may be segments requiring huge investments for market development; other segments may offer good potential but may indicate tough barriers to entry. So, which segment(s) the company should select as its target market assumes utmost importance. However, target marketing and market segmentation are not synonymous. Market targeting is the process of fixing one's target market. Marketing strategy should aim to look at each segment as a distinct marketing opportunity. The marketing head should assess and evaluate the company's resources and try to match the resources for the required marketing programmes for capturing the segments. Market segmentation and target market selection are closely related to marketing strategy formulations. Market segmentation is the prelude to target market selection and the latter is the prelude to strategy formulation.

### **Assembling the Marketing Mix:**

Assembling the marketing mix means assembling the four Ps of marketing in the right combination, i.e., the Product, Place, Promotion and Price.

At first, a company chooses or develops the product which would meet the customers' need, demand, aspirations and full satisfaction.

Secondly, it organises various distribution functions such as transportation, warehousing, distribution channel management, etc., so as to make the product easily available to the ultimate consumers.

Thirdly, the company develops a number of promotional measures such as advertising, sales campaign, personal selling and other sales promotional programmes. Lastly, the company uses the pricing mechanism in consideration of competitive advantage and profitability.

So, all activities and programmes which a company plans and carries out in its efforts towards winning customers relate to one or the other of the four elements – product, place (distribution), pricing and promotion. These four elements constitute the marketing mix of any company. A company may plan different marketing mixes with varying levels of expenditure on each element and attempt to explore the effectiveness of each combination in terms of the possible sales and profits. It then chooses the combination that is most appropriate and suitable vis-à-vis its judgement on corporate excellence.

Today, the entire business philosophy is based on customer's needs and satisfaction. Thus, the corporate strategy for long-term business planning should be based on assessment of customer



master plan that spells out overall objectives of the organisation and delineates the action plan for achievement of the objectives. It is the top management's plan to run the organisation towards a positive direction of growth and development. All this depends on correct marketing strategy which is the most vital limb of corporate strategy.

### **Growth under inflation and protection of shareholders' Real Capital:**

Inflation is caused due to several economic factors:

- When the government of a country print money in excess, prices increase to keep up with the increase in currency, leading to inflation.
- Increase in production and labour costs, have a direct impact on the price of the final product, resulting in inflation.
- When countries borrow money, they have to cope with the interest burden.
- This interest burden results in inflation.
- High taxes on consumer products, can also lead to inflation.
- Demands pull inflation, wherein the economy demands more goods and services than what is produced.
- Cost push inflation or supply shock inflation, wherein non availability of a commodity would lead to increase in prices.

Inflation is a situation when there is a continuous rise in the prices of commodities and factors of production thereby reducing the value of money. In inflationary situations there would be change in the pattern of income distribution. The government policy objective is to ensure stability of price levels to avoid the possibilities of inflation or deflation so as to maintain required growth of industries, business, trade and commerce, and thereby, overall economic growth. The rate at which prices increase may vary and there are several types of inflation, e.g.

1. Creeping Inflation with the price rise at the rate of 2-3 per cent per annum which promotes investment and does not lead to any adverse position.
2. Moderate Inflation – Inflationary situation when the price rise is at the rate of 4-5 per cent per annum and there are possibilities of an adverse effect.
3. Rapid Inflation is when the annual price rise is to the tune of 6 per cent, or more, which invariably leads to adverse fallout.
4. Recessionary Inflation – when moderate or mild inflation is not controlled and allowed to continue over a long period, the position may slide into recessionary inflation.

We often read about the inflation threat posed by stronger economic growth, with the word inflation here referring to a rise in the general price level. Inflation is, of course, a rise in the total supply of money, but for the purposes of this discussion there's no need to dwell on the importance of getting this particular definition right. What we'll dwell on today is the absurdity of the notion that growth causes prices to rise.



In a situation of creeping inflation, i.e., 2-3 per cent inflation, there are possibilities of business growth and better protection of shareholders. Aspiring entrepreneurs and business promoters are motivated and encouraged to invest capital resources for growth and development of business with an objective of higher profitability. Samuelson has commented: "Mild inflation lubricates the wheels of trade and industry". Corporate managers will try to find the scope of business growth in such an inflationary situation when price goes up slightly, profit by sales increases and demand of the product is also not hampered. The business managers will try to expand market to get better sales volume. This will increase the productivity in the short run and encourage long-term investment. Rising prices and profits encourage better production by optimum utilisation of production facilities and resources of the organisation, including human resources. This also helps in full production employment in a convenient manner and leads to better employee satisfaction and motivation. On the other hand, if the price level goes down, the same may lead to decreasing output leading to a decline in profits and the entrepreneurs may be de-motivated leading to heavy retrenchment.

Thus, a marginal rise in the price index, i.e., mild inflation, may help business growth in the short run and the situation is to be tackled and managed strategically for long-term investment with the available short-term surpluses.

Demand-Pull Inflation reveals a sustained rise in the aggregate demand which results in a sustained rise in the general price level. This according to Keynesian analysis, leads to an inflationary gap. Cost-Push Inflation results in sustained rise in the general price level because of rise in production cost. Production cost may go up owing to higher cost of inputs, i.e., material or labour cost. Price may also go up because of hike in profit margin by the producer/employer by fixing higher prices, if possible.

In framing a policy decision for protection of shareholders in determination of the dividends to be paid, careful consideration of various factors is necessary. The external factors are related to general condition of economy, state of the capital market, state-regulation and tax policy, etc., similarly, internal factors such as firm's investment opportunity and shareholders' preferences, stability of earnings, growth rate, access to capital market, liquidity position of company and its fund requirements, repayment of debt, restrictions in debt agreement and control factor, etc., should be duly considered in deciding dividend rate to safeguard the financial position of both the organisation and its shareholders for ensuring future growth.



## PART-E

### Major Contents of Part E:

- Financial objectives & Non- financial objectives
- Resources analysis and evaluation
- Principal Resource Planning Activities

### Financial objectives & Non- financial objectives:

In building up an enterprise the first important task is to lay down objectives and fix goals. It involves analysing the reason for the existence of the organisation and what would be the type of work or product or service it would specialise in relation to the investment, requirement and resources. The first step in organising all these is also to state the objectives of an organisation, i.e., what is the organisation trying to accomplish, what business is the organisation really in? Objectives represent ends towards which not only planning but all other activities of the management are directed. Thus, an organisation is created to accomplish goals. Similarly staffing, directing and controlling, all aim at reaching common objectives. There may be long-term and or short-term objectives depending upon the venture. Managing is more effective when based on clearly defined and properly selected objectives. Objectives should also be clearly explained and communicated throughout the organisation. The objectives should also be flexible so as to allow any strategic alteration if any conflict arises later.

To run smoothly the business, it would be necessary to identify the current business challenges and to face the same as well as move successfully together with the competitors. The main business challenges may be:

- Competition
- Quality
- Customers services
- Distribution logistics and quick delivery at the same time safe delivery
- Globalisation of business
- Substitutes for every product and services
- Free imports and dumping of products at cheaper rate and at the same time quality product
- Competitive price
- Value additions
- Rebates and discounts
- Incentives for cash sales as well as turnover discount
- After sales services
- Guarantee



Thus, these business challenges spread over the home as well as global markets have become a threat to the survival and growth of the organisation.

Therefore, a successful business, organisation will leave no efforts but to accept these challenges and work within these successfully.

To think of a single objective is not a worthwhile proposition. On the contrary, it would be realistic to consider a hierarchy of objectives. There are financial objectives as well as non-financial objectives. Again, there are major objectives for the organisation, as a whole, as well as departmental objectives. Similarly, some objectives are meant to be achieved in the short-term and other objectives may be intended for long-term accomplishment. There is always the need to decide the emphasis to be given in deciding objectives.

**Basic questions for objectives setting are:**

1. What business and market should the company try and reach?
2. To what extent should the company try to be integrated in order to be self-sufficient?
3. To what extent will the company diversify the product line to exploit new opportunities?
4. To what extent should the company make the required items and to what extent will it buy?

**Essential elements of objectives:**

- Starting point or the present position
- Terminal point or the expected result
- Specified time duration by which the objectives are to be achieved

**Financial Objectives:**

The financial objectives may be to identify:

- The detailed revenue base
- Critical resource needs and monitor the profitability for the organisation as a whole as well as product-wise.

Thus, financial objectives would be to meet the financial needs i.e. funds requirements as well as keep the continuity of profitability of the organisation.

This may necessitate:

- To develop new financial source
- To develop new products and product-mix
- To search new markets and enrich the existing markets together with customers satisfaction
- Cost reduction/cost control
- Resource maximisation.



### **Non-financial Objectives:**

Non-financial objectives may be something other than financial objectives related to:

- Profit
- Funds
- Return on capital employed
- Enhancing net worth
- Increase in turnover
- Cost control and cost reduction.

### **Non-financial objectives may broadly relate to:**

- Understand current business challenges
- Organisational strategy formulation and implementation
- Reorienting managerial values
- Creating organisations for future
- Bench-marking process for continuous improvements in the existing procedures and practices
- Working together
- Values, attitudes and work culture
- Managing-discipline
- Managing change.

These are the few non-financial objectives identified, which are equally important in the organisational development and growth.

### **Resource Analysis and Evaluation:**

The most important and critical resources for any organisation are human resources, i.e., the skill and competence of the people, financial resources, natural resources and organisational competence, goodwill and image. Every organisation has limits vis-à-vis its resources. The financial resources, the number and quality of key personnel, skill and work culture of the human resources, technological resources, the physical production capacity or the adaptability of its social structure—none of these is boundless. The aim and target of any organisation is how to plan for optimum utilisation of these limited resources to its best advantage. Every organisation must design a strategy which is practically possible to follow in real situations within the inherent restraints. In the strategy of any organisation, the plan, programme and policies are to be formulated after analysis of resources for proper allocation and cash flow management. So, analysis and allocation of resources are of paramount importance to any organisation.



In deciding a strategy, the decision makers must carefully examine and evaluate the organisation's skills and competence in the concerned field in order to assess where its strengths and weaknesses lie. Further, an important part of every strategy is the time horizon in which it is to be effected. A viable strategy not only reveals what goals are to be accomplished but also specifies the time horizon, giving the time schedule by which the goals are to be achieved. Organisations in the modern competitive business world must deploy expensive and complex resources in the pursuit of transitory opportunities. The time required to develop resources is so extended and opportunities are so brief that an organisation which has not carefully delineated and apprised of its strength and strategy is adrift in white water. The key competitive strengths of an organisation can be assessed by way of resource analysis, and thus, can be defined, and an insight into competitive strength can be gained. This also helps the managers at respective levels as they seem to allocate wisely the scarce resources of the organisation.

Resource planning refers to the process of organising the existing and potential resources available to a company to achieve defined objectives and targets within a specified period of time.

The main issues are:

1. Defined objectives and targets.
2. Total existing and potential resources, within classes, available to the company at the time of the review.
3. Evaluative criteria to be applied to select the optimum strategy.
4. Company's special sphere of influence (i.e., its distinctive competence) – is it still valid?
5. Methods of measurement and control.
6. Various planning systems, and the individuals and departments concerned at each stage.
7. Present and proposed product lines.
8. Details of corporate plans (i.e., long-term plans) setting the framework within which resource planning must be formulated.
9. Internal and external constraints and influences.

## **Principal Resource Planning Activities:**

### **Manpower**

Manpower requirements by:

- numbers
- skills
- grades
- age
- sex



- departments and cost centres
- factory
- night shift/day shift
- recruitment and training

### **Management succession**

- Job evaluation
- Bonus schemes and rates of pay

### **Finance**

- Sources, types and amounts available and required
- Rates of interest
- Cash flow, phased over accounting period
- Liquid, working and fixed assets
- Capital and revenue expenditure
- Debtors and Creditors

### **Material**

- Sources of raw material, bought-out parts, and sub-assemblies
- Reliability of supplier
- Prospects of substitute material
- Inspection, storage and insurance arrangements
- Transportation from supplier (i.e., whose responsibility)
- Losses through obsolescence and depreciation. Economic order quantities
- Calculation of issue price, LIFO, FIFO, average cost, etc.
- Payment arrangements

### **Plant and Equipment**

Full details of all plant and equipment, such as:

- types
- age
- rates of output
- expected utilisation
- maintenance arrangements



- manpower required for operation, setting up
- cost of production per unit
- by variable and fixed costs
- break-even points

The key areas in the planning of resources can be divided into three major classifications:

**1. Resource Identification:**

What resources will a strategy require for its implementation? Also, to what extent, if at all, do these resources complement existing resources? If they do not, how can resources become more integrated? There must be closeness between them at all stages.

**2. Planning Steps:**

The business must ask itself what the key tasks and priorities are in resource planning, both at strategic and operational levels.

**3. Testing Assumptions:**

All plans are based on assumptions, such as resource availability and capacity. Any assumptions made must be noted or they may be taken as fact and go unrecognised.

In the sphere of resource planning, it is at the operational level of organisation that the management of strategy implementation takes place. These strategies include:

- (i) A production strategy, related to production capacity, plant location, manning levels, etc.
- (ii) A supply strategy, identifying sources of supply as well as their spread and cost, and the reputation of the supplier.
- (iii) A marketing strategy, including product planning, distribution channels, pricing and provision of marketing resources.
- (iv) A manpower strategy, to make sure the right skills are available and training needs are identified, as well as to focus upon the size of the manpower requirement.
- (v) A financial strategy, related to all other resource planning, to ensure that the organisation has, the sources of funds to support capital expenditure as well as working capital.

In recent decades, management science has made a considerable contribution towards resource planning and allocation, management science being defined as the application of quantitative methods and social sciences in management.

Three examples of this contribution are:

- (i) **Linear Programming:** A technique for determining the optimum combination of the resources needed to obtain a desired goal. It is based on the assumption that there is a linear, or straight line relationship between variables and that the limits of the variations can be easily determined,
- (ii) **Sequencing:** Involves deciding the best order in which tasks should be performed, bearing in mind technological feasibility, e.g., plant limitation.
- (iii) **Network Analysis:** A term which describes a number of techniques used to plan and control complex projects consisting of a set of inter-related activities. The essence is to



represent the sequential relationships between the activities by a network of lines and circles.

Management action must be quick and flexible to take advantage of changes both internally and externally. The contribution of management science and its techniques is to give a more scientific approach to resource planning and allocation. With the aid of computers, information can be classified and used both accurately and quickly in management decision-making.



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## STUDY NOTE - 2

### Forecasting and Planning for Strategy

#### PART - A

##### Major Contents of Part A:

- Forecast trend and changes - social, political, legal and technological impacts
- Forecasting and Demand Forecasting
- Economic Forecasts – Trends and Change
- Environment; Scanning and Analysis of Environment

##### Forecast trend and changes - social, political, legal and technological impacts:

Demand forecasting and sales forecasting are important for any marketing planning and control as it serves the basis for comparison over a period of time. Forecasting helps in identifying and solving marketing and sales problems. Further, they are also used for setting performance standards.

Despite its importance, most marketing managers and entrepreneurs avoid making a forecast, as the element of uncertainty is high in such forecasts. This is because the environment is dynamic and uncertain.

##### Key Terms in Forecasting:

###### Market Potential:

Forecasting exercises involve understanding market potential.

The size of any market is based on the number of buyers who might exist for a particular marketing offer. These buyers need to have three characteristics:

- (a) Interest in the product
- (b) Income to be able to afford the product
- (c) Access to the product

Market potential refers to the upper limit of market demand. It is important for us to understand that there are three key terms involved in defining the market potential. These are

- (a) Market demand
- (b) Marketing expenditure by the industry
- (c) Defined market environment



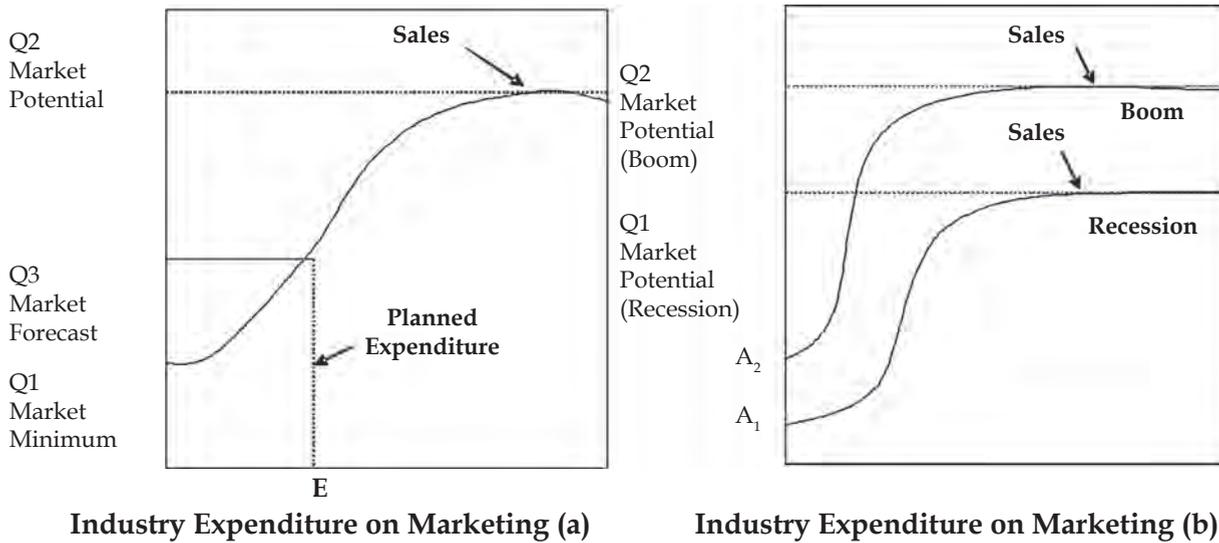
**Market Demand:**

Market demand refers to the “total volume that would be bought by a defined customer group in a defined geographical area, in a defined time period and in a defined marketing environment under a defined marketing programme.”

**Market Forecast:**

We know that at any given time there is only one level of industry marketing expenditure. The market demand corresponding to this level is called market forecast.

Following Figure illustrates the three concepts described above.



**Fig. Market Potential Demand and Forecast**

- (a) Marketing demand as a function of industry marketing expenditure (assumes a given marketing environment).
- (b) Marketing demand in two different marketing environments.

**Company Demand:** This refers to a company’s share of the total market demand. It is subject to all the determinants of the market demand, plus the determinants of the company’s market share.

**Company Potential:** Company Potential is the limit approached by company demand as its marketing effort increases relative to its competitors. The absolute limit to this potential is the market potential and this will be so only in a monopolistic situation.

**Sales Forecast:** Sales Forecast refers to the estimates of future sales of company’s products. This is the same as company demand.



Following Figure illustrates these concepts.

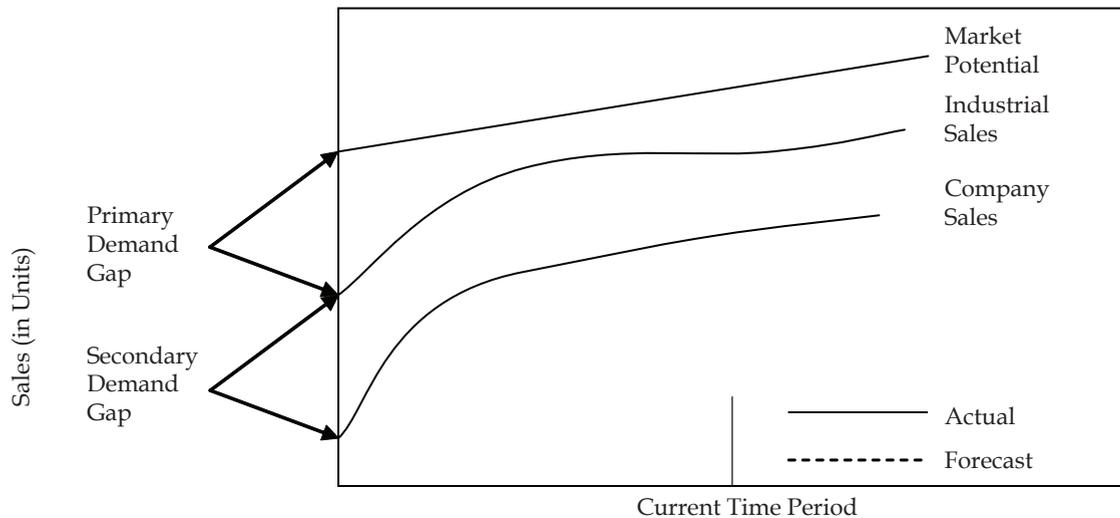


Fig. Basic kinds of Market Measurement

**Tools for Demand Forecasting:** There are two kinds of tools that one can use to estimate market demand. One, the qualitative (mainly survey) and the other, quantitative. Let us examine these tools in a greater detail.

### Qualitative Tools:

Qualitative tools involve opinion surveys. Some of the more prominently used ones are described below:

**Survey of Buying Intention:** This involves surveying the buyers to assess their intentions to buy the product. This is very useful in estimating the market demand for consumer durables or even a new product. This method could also be used to measure the demand for a product at a different level of marketing effort. For example, change in price and its effect on consumer demand can be studied through this method. The purchase intention of the buyer can be measured on a seven point scale from a “definitely buy” to a “definitely not buy”. The responses so obtained constitute purchase probability for a given product and hence an index of purchase probability can be made. This method is also useful industrial marketing. Though it is a useful method, it suffers from the same limitations as any other consumer survey does.

**Composite of Sales Force Opinion:** In this method, the company asks individual sales personnel to estimate sales of the given product in his or her territory. These estimates are then pooled and a national level forecast of sales obtained. Very few companies use this tool as, most often, sales people are believed to under estimate sales in their territories. The reason is that they would like to show a positive variance of sales against targets to their top management. It is for this reason that not many companies rely on sales force opinion poll.

**Delphi Technique:** This involves constituting a panel of experts and asking them to estimate the market demand for a given product. They are also asked to mention their assumption about the future market environment. Individual experts do not know who else is on the panel.



Since each expert works from his or her office, the chances of him or her getting influenced by others does not arise. Once the marketer gets the estimates, he or she isolates extreme opinions and estimates and reverts back to the concerned expert giving them the assumptions which others have made. However, the marketer does not reveal the estimate of the other experts. The objective of sending back extreme opinions is to get a consensus. But, should the extreme opinion holders choose not to revise their opinions; the marketer will have to leave it at that. But this method can help to know the different scenarios and is particularly useful in estimating demand for a new product or technology.

A variant of the Delphi Technique is the expert opinion poll in which a firm may interview experts in its industry. These experts could be dealers, large buyers, marketing consultants and trade associations. But these polls too have the same limitations as that of the consumer survey. Nevertheless, these polls are commonly used by many firms for estimating the market demand and company's market share.

### Quantitative Techniques:

The quantitative techniques could further be categorised as:

- (a) tools for short-term forecasting
- (b) tools for long-term forecasting

#### Short-term Forecasting

The short-term forecast refers to all forecasts upto a period of one year. Most often the sales managers are interested in this forecast. Tools commonly used here are clubbed as extrapolation techniques. Illustrations of these are exponential smoothing, time series decomposition and several naive models. The most common is exponential smoothing technique which is a type of moving average that represents a weighted sum of all past numbers in the time series with the heaviest weight placed on the most recent information. This method involves estimating the value of "smoothing constant" (usually designated by the symbol  $\alpha$ ) and then using it to "smooth" the raw sales data. The assumption in this method is that actual sales are a function of environmental factors and the method helps to "smooth" out these factors. The exponential smoothing method can be represented symbolically as being  $S_t = \alpha X_t + (1 - \alpha) S_{t-1}$

Where  $S_t$  refers to smoothed sales in period 't'

$\alpha$  is smoothing constant with a value between 0 - 1

$X_t$  is actual sales in period t

$S_{t-1}$  is smoothed sales in period t - 1

A major challenge is that of estimating a value. In fact, this problem of assigning a value to a creates a limitation in the usage of this method. A general principle used here is that if the time series changes very slowly the value of  $\alpha$  could be small to keep the effect of earlier observations. But if the changes are too rapid, a value will have to be high to give forecasts responsive to these market changes. In reality, the value of  $\alpha$  is estimated by trying several values and making retrospective tests of the associated error function. The  $\alpha$  value leading to the smallest error is then chosen for future smoothing.



### Tools for Long-term Forecast:

Long-term forecast refers to forecasts for a period of three years or more. Here the methods are

- (i) Time Series Analysis
- (ii) Correlation
- (iii) Econometric models

From among these, Time Series Analysis and Correlation are of interest to decision makers.

- (i) **Time Series Analysis:** Most firms have their own industry and sales data for the previous years. Decomposing this time series and then estimating sales for the next time period is called time series analysis. To use this method, the marketer should have time series for the last ten years. Two approaches to decomposing time series are the additive and multiplicative. The sales over a time period is a function of trend, cyclically, seasonally and erratic factors. A common functional form to express it is:

$$O = T \times C \times S \times I$$

Where O refers to observed sales

T is trend component

C is cyclical component

S is seasonality component

I is irregular or erratic factor

In the additive approach sales is seen as aggregate effect of all these variables and is symbolically depicted as

$$O = T + C + S + I$$

- (ii) **Correlation Method :** It is commonly believed that sale of a product is a function of several variables like price, advertising expenditure, distribution expenditure, personal disposable income, etc. This relationship is reflected by the following equation:

$$Y = f(X_1, X_2, X_3, \dots, X_n)$$

Where Y is the sales in volume or monetary terms

$X_1, X_2, X_3, \dots, X_n$  are independent demand variables.

Today this method is increasingly being used. However, a marketer needs to be wary of problems like too few observations, too much correlation among independent variables, violation of normal distribution assumptions, two way causations and emergence of new variables not being accounted for.

Today with increasing use of computers one can achieve higher level of sophistication in demand estimation. But one has to consider the cost and value of such estimation in actual decision making. And this where the probability theory helps the marketer.



Market measurement and estimation of current and future demand is important as a number of marketing decisions are based on it. Decisions like new product introductions or a change in one of the elements of marketing mix and its impact on firm's sales are some of the areas requiring demand analysis. Besides, demand estimation helps in setting performance standards and evaluating marketing personnel. It is important to understand key terms used in demand estimation and also the different techniques or tools for estimation.

- Market estimation involves understanding of key terms like market potential, company demand and sales forecast.
- The market potential is the limit approached by the market demand as industry marketing expenditure approaches infinity.
- Market demand is always linked to a product and estimated for a given time period under an assumed marketing environment.
- The tools for market estimation are both quantitative and qualitative. Depending on the objectives of a market planner and the time frame, the tool for estimation is chosen.

### **Economic Forecasts – Trends and Change:**

Forecasting may be defined as analysis and interpretation of future. It involves looking ahead and projecting the future course of events.

The essence of planning lies in forecasting. It requires assessment of future and making provisions for it. A forecast can be defined as an array of information which helps the corporate planners reach a decision. It requires analysis of statistical data and other economic and market information for the purpose of reducing the risks involved in long-range plans.

There are various kinds of forecasts, of which economic forecast is most important. Economic forecasts cover levels of production, price, wages, per capita income, gross national income, economic policy of the government, purchasing power of customers, international monetary policy, etc. It is not possible to always predict a business cycle accurately. However, symptoms of the coming changes in the level of economic activity are evident and it is often possible to make an informed estimate.

Three principal methods are used for economic forecasts.

#### **1. Lead and Lag Method:**

In this system, the past patterns of various types of statistics are examined to ascertain whether they have consistently moved in advance of general business trends, moved simultaneously with trends or lagged behind. A quantitative analysis must also be made alongside the mathematical analysis. For example, increased consumer demand, rising consumer income, increased production, rising government spending, etc., are all factors that boost the general level of economy.

#### **2. Overshoot and Opposite Factors Method:**

This is based on the proposition that whenever business activity rises above 'normal', a reaction is bound to set in, and the greater the rise the greater the reaction that follows.



### 3. Weighing Opposite Factors Method:

This consists of merely listing factors for and against expansion or contraction and striking a balance.

#### **Econometrics:**

It is called the science of measurement. The principal variables are combined in a series of equations in a mathematical model to provide solutions. It involves measurements of economic variables, including correlation analysis. Using such analysis, one can construct equations that relate relevant variables to the factor being predicted, and therefore, to develop predictive equations. Such equations are used:

- To forecast market size
- To forecast prices
- To forecast the relationship between volume of activity and costs, and
- To relate profit to supply of raw materials

Econometric forecasting is a rapidly expanding field. One econometric technique which is growing rapidly is the use of input-output models. Input-output analysis is a method for analysing the inter-relationships within a particular economy to uncover existing inter-dependencies. The main advantage of input-output analysis is that the inter-industry forecasting provides detail by industry, and by markets, which the aggregative econometric models do not. With the advent of sophisticated computers it has become more convenient to develop 'Causal models', especially those involving econometrics. These models utilize complex simultaneous regression equations to relate economic occurrences to areas of corporate activity.

**Market Research:** It is defined as the gathering, recording and analysing of all facts about problems relating to the transfer and sale of goods and services from producer to consumer. Essentially, it is designed to discover not only how much a company can sell, but where, to whom and how.

#### **Social Environment:**

There is increasing emphasis in strategy literature on business ethics, and on the pressures faced by organisations operating within increasingly complex and demanding social and ethical environments. As concerns for the natural environment have grown, so too have demands that organisations conduct themselves with greater care and responsibility for the environment.

Social environment concerns the values, attitude, opinion, beliefs and lifestyle of the people in the society and of those in a firm's external environment, as developed from their cultural, religious, educational, ecological, demographic and ethnic conditioning. With the change of social attitude the demand of various goods and articles among the people in the society automatically changes. A lot of variables should be taken into account if one should decide to do a business in a certain location. One variable to consider is to what degree a social environment of the business is conducive to the business success. Business will accumulate wealth only if the business ecosystem supports the growth of business. One aspects of business ecosystem is the social environment. Decision to invest in a certain location (community, region or state)



should consider to what degree the social environment at a particular location is conducive for business development.

### Main elements of Societies and its effect on Business:-

1. **Family:** Family is basic part of society from the birth of a person and upto death, he lives in family so personal decision of buying and selling of goods are affects from family. In the culture of a family, it may happen that parent does not allow using any product, then sale of such product will decrease, so businessman must analyse different family's needs. Many occasion of family like marriage of any family member, can increase the demand of goods.
2. **Educational institutions:** Educational institutions are also main part of societies. They provide good knowledge, education, awareness, thinking what should students buy or not to buy. Suppose if a student is habitual to drink the tea and if his teacher advice him that this is harmful to his health after his guidance students can avoid drinking tea after this the sale of tea will decrease.
3. **Religion:** Like family and education institution, religion is also effects the business socially. Religion means the system in which group of persons trust in God. They believe that there is one supernatural power in this earth and its name is God. Different religions have different principles, rules and regulations in which they sacrifice to use some products and to eat some food, in Hindu religion, they never use leather products. They affect the sale of leather industries. So, businessman must analyse the targeted audience and after listening their religious thoughts, he should produce the goods.

### Economic Environment:

Economic environment refers to the aggregate of the nature of economic system of the country, the structural anatomy of the economy to economic policies of the government the organisation of the capital market, the nature of factor endowment, business cycles, the socio-economic infrastructure etc. The successful businessman visualizes the external factors affecting the business, anticipating the prospective market situations and makes suitable to get the maximum with minimise cost. The critical elements of macro-economic environment are:

1. Economic system
2. Nature of the economy
3. Autonomy of the economy
4. Functioning of the economy
5. Economic trends and structures
6. Economic planning and progress
7. Economic policy statements and proposals
8. Economic control and regulations



9. Economic legislation
10. Economic problems and prospects

### **Technological Environment:**

Technology can be defined as the method or technique for converting inputs to outputs in accomplishing a specific task. Thus, the terms 'method' and 'technique' refer not only to the knowledge but also to the skills and the means for accomplishing a task. Technological innovation, then, refers to the increase in knowledge, the improvement in skills, or the discovery of a new or improved means that extends people's ability to achieve a given task.

Technological environment with the change and development of technology has radically contributed towards advancement of industrialisation.

Technological advances gave rise to newer products, processes and technology to efficiently meet the customers' needs. Technological achievements have reduced the time and cost of communication and transportation. These include the discoveries of science and updated products with total quality management, the impact of related product development and the progress of automation, radio, and television and satellite communication bearing the news simultaneously to people around the world.

The business in a country is greatly influenced by the technological development. The technology adopted by the industries determines the type and quality of goods and services to be produced and the type and quality of plant and equipment to be used. Technological environment influences the business in terms of investment in technology, consistent application of technology and the effects of technology on markets. In India, advancements in automation and information technology have posed the challenging situation for the organisation in future level as also at industrial unit level.

### **Legal Environment:**

The legal environment is derived partly from the political climate in a country and has three distinct dimensions to it:

- The domestic laws of your home country
- The domestic laws of each of your foreign markets
- International law in general
- Legal systems vary from country to country

Organisations must operate within a framework of governmental regulation and legislation. Government relationships with organisations encompass subsidies, tariffs, import quotas, and deregulation of industries. The political environment includes governmental and special interest groups that influence and limit various organisations and individuals in a given society. Organisations hire lobbyists to influence legislation and run advocacy ads that state their point of view on public issues. Special interest groups have grown in number and power over the last three decades, putting more constraints on marketers. The public expects organisations to



be ethical and responsible. An example of response by marketers to special interests is green marketing, the use of recyclable or biodegradable packing materials as part of marketing strategy.

The major purposes of business legislation include protection of companies from unfair competition, protection of consumers from unfair business practices and protection of the interests of society from unbridled business behavior. The legal environment becomes more complicated as organisations expand globally and face governmental structures quite different from those within India.

### **Scanning and Analysis of Environment:**

In today's context, scanning and analysis of the environment is of crucial importance for formulating proper strategic planning for operation and development of business. For such scanning and analysis, the environment may be classified into two broad categories – economic and non-economic. Economic environment refers to the national fiscal policy, monetary policy, industrial policy, import-export policy, policy on forex transactions, physical limits on output, the income and price trends, national economic plan, etc.

On the other hand, non-economic environment includes factors such as the political, social, legal, educational and cultural aspects that effect business operations. The non-economic environment has economic implications just as the economic environment may have non-economic implications various external and uncontrollable factors influence a company's decision on future business planning and thereby its organisational structure and internal processes. These factors and forces which constitute the external environment are classified by some strategists into two inter-related sub-categories – those in the remote environment and those in the more immediate operating competitive environment. The constituents of remote environment are the forces that originate beyond any organisation's operating condition, i.e., political, social, economic, technological, and legal and industry factors. It provides opportunities and possesses threats and constraints for the business firm, while the organisation rarely exerts any meaningful reciprocal influence.



## PART-B

### Major Contents of Part B includes:

- Distribution channels and competitive forces
- Marketing Channels
- Marketing Functions Performed in Channels of Distribution - Channel Control - Total Distribution Cost - Channel Flexibility
- Competitive Environment
- The impact of globalisation on competition
- The competitive advantage of a nation's industries - Structural Analysis and Competitive Strategy
- Government policies, economic growth and government expenditure.

### **Distribution channels and Competitive forces:**

#### **Channel Strategy:**

In modern economy, most producers do not sell their goods directly to the final users. Between them and the final users, there are different intermediaries performing a variety of functions and bearing a variety of names. Some intermediaries such as wholesalers and retailers-buy, take little to, and sell the merchandise; they are called merchant middlemen.

Two aspects of channel decisions place them among the most critical marketing decisions of management. The first is that the channels chosen for the company's products intimately affect every other marketing decisions.

The second reason for the significance of channel decisions is that they involve the firm in relatively long-term commitments to other firms.

A channel of distribution is the combination of institutions through which a seller markets products to industrial buyers or ultimate consumers. In direct channels, manufacturers sell directly to end users. In indirect channels, manufacturers use one or more intermediaries to sell to end users.

Manufacturers use intermediaries because intermediaries can perform marketing functions more efficiently than manufacturers or because manufacturers lack the financial resources or expertise to market directly to consumers. From the consumer's viewpoint, channels provide form, time, place, and possession utility. To create form utility is to convert raw materials into finished goods and services that consumers seek to purchase. Creating time utility means making products available when consumers want to buy them. In creating place utility, channels make products available where consumers can purchase them. In creating possession utility, channels facilitate the transfer of ownership of products from manufacturers to consumers.



Given the variety of types of intermediaries, distribution functions, and types of utility provided to consumers by channels, the task of selecting and designing a channel of distribution may at first appear overwhelming. However, in many industries all competitors use essentially the same channel structure and the same types of intermediaries. In these industries, a manufacturer may have to use the traditional channels in order to compete in the industry. For example, nationally branded consumer food products are typically sold in a variety of grocery stores, and automobiles are typically sold through franchised dealers.

These channels are likely to be highly efficient and thus appropriate for a manufacturer.

In addition, no other types of intermediaries may be available to market the product. This is not to say that channel design allows no room for innovation.

The four major concerns in designing channels of distribution coverage, channel control, total distribution cost, and channel flexibility.

**Distribution Coverage:** Because of the characteristics of the product, the environment needed to sell the product, and the needs and expectations of potential buyers, different products call for varying intensity of distribution coverage. Distribution coverage varies on a continuum from intensive through selective to exclusive distribution.

**Intensive distribution:** It involves selling the product through as many wholesalers and retailers as possible. Intensive distribution is appropriate for most convenience goods because of their low unit value and high frequency of purchase.

**Selective distribution:** It involves selling through a limited number of intermediaries in a particular geographic area. Appliances and home furnishings are usually distributed selectively, on the basis of the reputation and service quality of particular retailers.

**Exclusive distribution:** It involves selling through only one intermediary in a particular territory and is commonly employed to increase the selling effort for a manufacturer's product. Automobile dealerships and beer distributors are examples of exclusive distribution arrangements.

## Marketing Channel:

**The Nature of Marketing Channels:** Every producer seeks to link together the set of marketing intermediaries which fulfill the firm's objectives. This set of marketing intermediaries is called the marketing channel. Bucklin defined marketing channel: "A channel of distribution shall be considered to comprise a set of institutions which perform all the activities (functions) utilised to move a product and its title from production to consumption".

**Number of Channel Levels:** Marketing channels can be characterised according to the number of channel levels. Each institution and persons who work to bring the product and its title to the point of consumption constitutes a channel level. Since both the producer and the ultimate consumer perform some work in bringing the product and its title to point of consumption, they are included in every channel. There are the numbers of intermediary levels to designate the length of a channel.



1. **Zero-Level Channel:** - It is also called a direct marketing channel. It consists of a manufacturer selling directly to a consumer.
2. **One Level Channel:** - It contains one selling intermediary.  
In consumer markets this intermediary is typically a retailer. In industrial markets, it is often a sales agent or a broker.
3. **Two-Level Channel:** - It contains two intermediaries. In consumer markets they are typically a wholesaler and a retailer. In industrial markets they may be a sales agent and wholesaler.
4. **Three-Level Channel:** - A three-level channel contains three intermediaries. An example is found in the meat packing industry, where a jobber usually intervenes between the wholesalers and the retailers. The jobber buys from wholesalers and sells to the smaller retailers, who generally are not serviced by the large wholesaler.
5. **Higher-Level marketing channels:** - They are also found, but with less frequency. From the producer's point of view the problem of control increases the number of levels, even though the manufacturer typically deals only with the adjacent level.

### Types of Channel Flows:

The various institutions that make up a marketing channel are connected by several distinguishable types of flows. The most important are the physical flow, payment flow, information flow, and promotion flow.

The physical flow describes the actual movement of physical products from raw materials to final customers. The title flow describes the actual passage of title (of ownership) from one marketing institution to another. In this case title to the raw materials and components passes from the suppliers to the manufacturer. The title to the finished trucks passes from the manufacturer to the dealers and then to the customers. The payment flow show customers paying their bills through banks and other financial institutions to the dealers, the dealer remitting payment to the manufacturer, and the manufacturer making payment to various suppliers. There will also be payments made to transporters and independent warehouses. The information flow describes how information is exchanged among the institutions in the marketing channel. Two-way information exchange takes place between each successive stage in the channel, and these are several information flows between non-adjacent institutions.

Finally, the promotion flow describes directed flow of influence (advertising personnel selling sales promotion and publicity) from one party to other parties in the system. Suppliers promote their name and products to the manufacturers. They may also promote their names and products to final customers in the hope of influencing the manufacturer to prefer products embodying their parts or materials. A promotion flow is also directed by the manufacturer to dealers (trade promotion) and final customers (end-user promotion).

Channels normally are thought to describe routes from the forward movement of products, increasingly there is talk about the development of backward channels.

**Marketing Channel Functions:** - A marketing channel is essentially a method of organising the work that has to be done to move goods from producers to consumers. The purpose of



the work is to overcome various gaps that separate the goods and services from those who would use them. The work of middlemen is designed to create form, time, place and possession utilities. Several functions or tasks are involved in this work. The major marketing channel functions are:-

- **Research:** - The gathering of information necessary for planning and facilitating exchange.
- **Promotion:** - The development and dissemination of persuasive communications about the offer.
- **Contact:** - The searching out and communicating with prospective buyers.
- **Matching:** - The shaping and fitting of the offer to the buyer's requirements. It includes such activities as manufacturing, grading, assembling, and packaging.
- **Negotiation:** - The attempt to reach final agreement on price and other terms of the offer so that transfer of ownership or possession could be effected.
- **Physical Distribution:** - The transporting and storing of the goods.
- **Financing:** - The acquisition and dispersal of funds to cover to the costs of the channel work.
- **Risk Taking:** - The assumption of risks in connection with carrying out the channel work.

The first-five functions deal primarily with consummating transactions, while the last three act as facilitating functions.

It is not a question of whether these functions must be performed in order to bridge the gaps between producer and customer. All of the functions have three things in common. They use up scarce resources, often they can be performed better through specialisation, and they are shiftable, to the extent that the manufacturer performs them, if the costs go up and its prices have to be higher. When some of these tasks are delegated to middlemen, the producer's costs and services are lower, but the middlemen must add a charge to cover the use of scarce resources. The issue of who should perform various channel tasks is largely one of the relative efficiency and effectiveness to the extent that specialist intermediaries achieve economies through their scale of operation and their know-how, the producer can gain by transferring some of the channel functions to their charge.

The major point to keep in mind is that marketing functions are more basic than the institutions that at any given time appear to perform them. Changes in the number of channel levels and/or channel institutions largely reflect the discovery of more efficient ways to combine or separate the economic work that must be carried out if useful assortments of goods are to be provided to target customers.

#### **Marketing Functions Performed in Channels of Distribution:**

- Buying — Purchasing products from sellers for use or for resale.
- Selling — Promoting the sale of products to ultimate consumers or industrial buyers.



- 
- Sorting – Function performed by intermediaries in order to bridge the discrepancy between the assortment of goods and services generated by the producer and the assortment demanded by the consumer. This function includes four distinct processes: sorting out, accumulating, allocating, and assorting.
- Sorting out – Sorting process that breaks down a heterogeneous supply into separate stocks which are relatively homogeneous.
- Accumulating – Sorting process that brings similar stocks from a number of sources together into a larger, homogeneous supply.
- Allocating – Sorting process that consists of breaking a homogeneous supply down into smaller and smaller lots.
- Assorting – Sorting process that consists of building an assortment of products for use in association with each other.
- Concentrating – Process of bringing goods from various places together in one place.
- Financing – Providing credit or funds to facilitate a transaction.
- Storing – Maintaining inventories and protecting products to provide better customer service.
- Grading – Classifying products into different categories on the basis of quality.
- Transporting – Physically moving products from where they are made to where they are purchased and used.
- Risk-taking – Taking on business risks involved in transporting and owning products.
- Market Research – Collecting information concerning such things as market conditions, expected sales, consumer trends, and competitive forces.

**Channel Control:** One important influence on the design of distribution channels is the amount of control an organisation wants over the marketing of its products. Typically, a more direct and exclusive channel gives a manufacturer more control. Often, however, a channel is controlled by an intermediary rather than the manufacturer. For example, a large retailer such as Sears, Reebok may control small manufacturers who produce Sears-labeled products.

**Total Distribution Cost:** The concept of total distribution cost suggests that channels should be designed to minimise costs, other things being equal. Thus, if a system of wholesalers and retailers can distribute a product more cheaply than marketing directly to consumers, such a system should be selected, other things equal. However, it is also important to consider the effects of a particular channel on sales, profits, the total marketing mix, and the level of consumer service that is needed to make the product successful.

**Channel Flexibility:** One reason why a channel strategy must be chosen so carefully is that it usually involves a long-term commitment to a particular course of action. Channels are typically not changed as frequently as other elements of the marketing mix. For example, long-term leases for retail store space and long-term agreements with wholesalers limit the flexibility of an organisation. In general, more uncertainty in the environment makes channel alternatives that involve long-term commitments less favorable.



The following several questions that can help in analysing channel strategies.

### Some Questions to Ask When Analysing Channel Strategies

1. What is the target market for this product, and where do these consumers usually purchase?
2. What is the nature of the product, and what problems and opportunities does this information suggest for distribution?
3. How do competitors distribute products like this, and how successful have they been?
4. What are the total distribution costs of various channel alternatives?
5. What degree of market coverage is needed to reach the target market?
6. How competent is the organisation to manage various types of channels?
7. How much control over the channel does the organisation want?
8. Are appropriate intermediaries available and willing to distribute and market the product?
9. What is the relative market power of the manufacturer versus different types of intermediaries?
10. Can the manufacturer afford to perform all of the marketing functions, and can it do so efficiently?

### Competitive Environment:

**Industry Structure Analysis:** The initial analysis of industry structure provides a snap of the competitive environment.

The strategists also need to anticipate future trends; new developments that may change the existing structure.

#### Distinction between market and industry:

- The market comprises customers or potential customers, having needs, and which are satisfied by a product or services.
- The industry comprises those firms which use a particular competence, technology, product or service to satisfy customer needs.
- An individual company might be found in any of the following situation:
  - One industry, one market
  - Two or more industries, one market
  - One industry, two or more markets
  - Two or more industries, two or more markets

Of course, the boundaries between individual industries and between individual markets are not hard and fast. Porter makes a distinction between two groups of factors.



- a. Environmental factors that characterise the nature of competition in one industry compared with another- e.g. in the chemical industry compared to clothing retail industry - and make one industry as a whole potentially more profitable than another.
- b. Factors that characterise the nature of competition within-a particular industry, these relate to the competitive strategies that individual firms might select.

Porter writes as follows: 'Although the relevant environment is very broad, encompassing social as well as economic forces, the key aspect of the firm's environment is the industry or industries in which it competes. Industry structure has a long influence in determining the rules of the game as well as the strategies potentially available to the firm. ...The intensity of competition in an industry is neither a matter of coincidence nor bad luck. Rather, competition in an industry rooted in its underlying economic structure, and goes well beyond the behaviour of current competitors'.

### Competitive Forces within an Industry:

Michael E. Porter, the renowned author of *Competitive Strategy*, *Competitive Advantage* and *Competitive Advantage of Nations*, has provided a structural analysis of industries. According to this analysis, which has gained great popularity, the state of competition in an industry depends on five basic competitive forces, viz.,

1. Rivalry among existing firms
2. Threat of new entrants
3. Threat of substitutes
4. Bargaining power of suppliers
5. Bargaining power of buyers

These five competitive forces are shown in the diagram below:

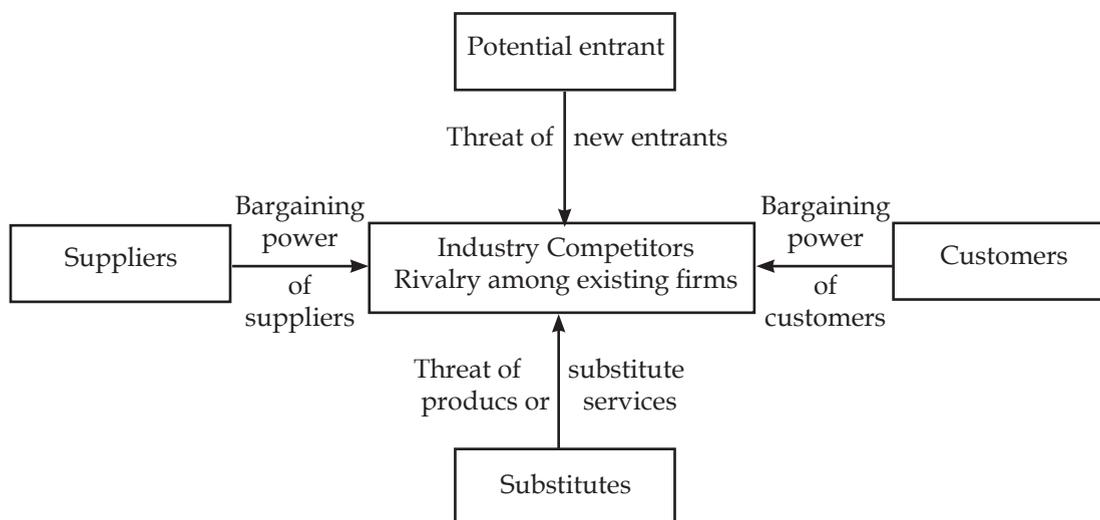


Fig. Five competitive forces



Porter's analysis, thus, shows that competition in an industry goes well beyond the established players. "Knowledge of these underlying sources of competitive pressure highlights the critical strengths and weaknesses of the company, animates its positioning in its industry clarifies the areas where strategic changes may yield the greatest payoff, and highlights the areas where industry trends promise to hold the greatest significance as either opportunities or threats. Understanding these sources will also prove to be useful in considering areas for diversification, though the primary focus here is on strategy in individual industries. Structural analysis is the fundamental underpinning for formulating competitive strategy."

Fig. depicts the five forces competitive structure of industry. The diagram is a slightly modified presentation of the one provided by Porter. The arrows in the diverse directions indicate opposing forces. For example, just as the buyers and suppliers may have bargaining power over the firm, the firm may also have some bargaining power over the buyers and suppliers.

**The Threat of New Entrants:** a new entrant into an industry will bring extra capacity. The new entrant will have to make an investment to break into the market, and will want to obtain a certain market share. The strength of the threat from new entrants depends on two factors:

- The strength of the barriers of entry
- The likely response of existing competitors to the new entrants.

Barriers of entry are a term used in economics to describe the factors which make it difficult for a new entrant to gain a foothold in an industry. Barriers of entry can be categorised as:

- (a) **Economics of scale:** High fixed costs imply a high break even point, and profit might depend on the ability to achieve a high volume of sales. If the industry is one in which significant economies can be obtained by producing above certain volumes of output, existing firms in the industry will have a big cost advantage over a new entrant, provided of course that they are already achieving the economies of scale themselves.
- (b) **Product differentiation:** Existing firms in an industry may have built up a good reputation for their products and strong customer loyalty over a long period of time, through advertising, product quality etc. Moreover, a firm might develop a variety of brands to crowd out the competition.
- (c) **Capital requirement:** The amount of capital that is needed for a new entrant to invest in an industry in an industry varies from one industry to another.
- (d) **Switching cost:** Switching costs refer to the costs that a customer would have to incur by switching from one supplier's product to another's. The costs are not just financial: time and inconvenience are costs in this context. The consequences of a switch might include the following:
  - having to buy new ancillary equipment that is compatible with the equipment of the new supplier.
  - the loss of the existing supplier's after-sale service, which might include the provision of technical support to the customer.
  - the risk that the new supplier will be less reliable than the existing supplier.



- (e) **Access to distribution channels:** Distribution channels are the means by which a manufacturer's products reach the end-buyer. Sometimes, new distribution channels are difficult to establish, and existing distribution channels are hard to gain access to.
- (f) **Cost advantages of existing producers, independent of economies of scale:**
- Patent rights - Patents give the owner exclusive rights over a product or process. These however expire after a certain time, but this time does give the firm a breathing space. The equivalent in publishing is copy right.
  - Experience and know how
  - Government subsidies
  - Access to sources of raw materials on favourable terms.

**Entry barrier are not static:**

- They can be raised by a number of measures. A firm can maximise early sales demand to increase the cumulative volume needed to be profitable. A firm can increase potential new entrant's perception of risk. A firm can attempt to control distribution channels.
- Entry barriers might be lowered by changes in the environment, in particular by cost-reducing technological changes, which a new entrant can invest in straightway and so compete more effectively against established firms in the industry. New entrants might be able to identify novel distribution channels for products or services.

### **The Threat from Substitute Products:**

The products or services that are produced in one industry are likely to have substitutes that are produced by another industry, which satisfy the same customer need. When firms in an industry are faced with threats from substitute products, they are likely to find that demand for their products is relatively sensitive to price. An important threat that they must watch out for is any improvement in the price-performance characteristics of these substitutes.

'Substitutes limit the potential returns of an industry by placing a ceiling on the prices, firms in the industry can profitably charge. The more attractive the profit-performance alternative offered by substitutes, the firmer the lid on industry profits'. (Porter)

### **The Bargaining Power of Customers:**

Customers should want better quality products and services at a lower price, and if they succeed in getting what they want, they will force down the profitability of suppliers in the industry. The profitability of an industry is therefore, dependent on the customers' bargaining power.

Just how strong the position of customers will depend on a number of factors:

- If the customers' purchase represents a substantial proportion of total sales by the producer, the customer will be in a strong position relative to the seller.
- If most of a customer's supplies come from a single industry, the customer will be in a weaker bargaining position than if only a small proportion did so.



- Whether switching costs are high or low
- Whether the products supplied by the industry are standard items & undifferentiated. Suppliers will try to increase their bargaining power over customers by creating a strong brand image.
- A customer who makes low profits will be forced to insist on low prices from suppliers.
- The threat that customers might take over sources of supply, if suppliers charge too much.
- The skills of the customers' purchasing staff, or the price-awareness of customers.
- When product quality is important to the customer, the customer is less likely to be price-sensitive- and so the industry might be more profitable as a consequence.

### **The Bargaining Power of Suppliers:**

Just as customers can influence the profitability of an industry by exerting pressure for higher quality products or lower prices, so too can suppliers influence profitability by exerting pressure for higher prices. The ability of suppliers to get prices depends on the following factors:

- Whether there are just one or two dominant suppliers to the industry, able to change monopoly prices.
- Whether the suppliers are threatened by new entrants to the market, or by substitute products.
- Whether the suppliers have other customers outside the industry, and do not rely on the industry for the majority of their sales.
- The importance of supplier's products to the customer's business.
- Whether the supplier has a differentiated product which buyers need to obtain.
- Whether switching costs for buyers would be high.

### **The Rivalry amongst Current Competitors in the Industry:**

The intensity of competitive rivalry within an industry will affect the profitability of the industry as a whole. Competitive action might take the form of price competition, advertising battles, sales promotion campaigns, introducing new product from the market, improving after sales services or providing guarantee or warranties.

Competition can do one of two things.

- (a) It can help the industry as a whole to expand, stimulating demand with new products and advertising. In this situation, the industry as a whole will benefit from the competition.
- (b) It can lead demand unchanged, in which case individual competitors will simply be spending more money, charging lower prices and so making lower profits, without getting any benefits except monitoring or increasing market share.



The intensity of competition will depend on the following factors:

- whether there are a large number of equally balanced competitors. Industries with a large number of equally balanced competitors. Industries with a large number of firms are likely to be very competitive, but when the industry is dominated by a small number of large firms, competition is likely to be less intense, or is restricted.
  - (i) cartels are easier to organise.
  - (ii) even where competition is intense, firms will try to avoid competing on price.
  - (iii) an organisation might want to obtain information about the concentration ratios in the market.
- The rate of growth in the industry. When firms are all benefiting from growth in total demand, their rivalry will be less intense. Rivalry is intensified when firms are competing for a greater market share in a total market where growth is slow or stagnant, especially where the costs of leaving the market are high.
- Where fixed costs are high. If fixed costs are high, and variable costs are relatively small proportion of the selling price, it is often tempting for firms to begin to compete on price, and to sell at prices above marginal cost, even though this will mean a failure to cover fixed costs and make an adequate return in the longer run. In the short run, any contribution from sales is better than none at all.
- Ease of switching will encourage suppliers to compete.
- Capacity and unit costs. A supplier might need to achieve a substantial increase in output capacity, in order to obtain reductions in unit costs. When an industry is characterised by economies of scale from substantial increase in capacity, the industry may face recurring periods of over capacity and price cutting.
- The difficulty that competitors may have in guessing each other's intentions. When one firm is not sure where another is up to, there is a tendency to respond to the uncertainty by formulating a more competitive strategy.
- High strategic stakes. If a firm in the industry has put a lot of capital and effort into achieving certain targets within the industry and has made success in the industry, a prime strategic objective, the firm will be likely to act very competitive in order to ensure that its targets are achieved.
- Exit barriers make it difficult for an existing supplier to leave the industry. These include the following:
  - (i) Fixed assets with a lower break-up value.
  - (ii) The cost of redundancy payments to employees, or the cost of relocating and retaining them.
  - (iii) If a firm is a division or subsidiary of a large organisation, the effect of withdrawal from the industry on the other operations within the group.
  - (iv) The reluctance of managers to admit defeat, their loyalty to employees and their fear for their own jobs.



- (v) Government pressures on major employers not to shut down operations, especially when competition comes from foreign producers rather than other domestic producers.

### **The impact of Globalisation on Competition:**

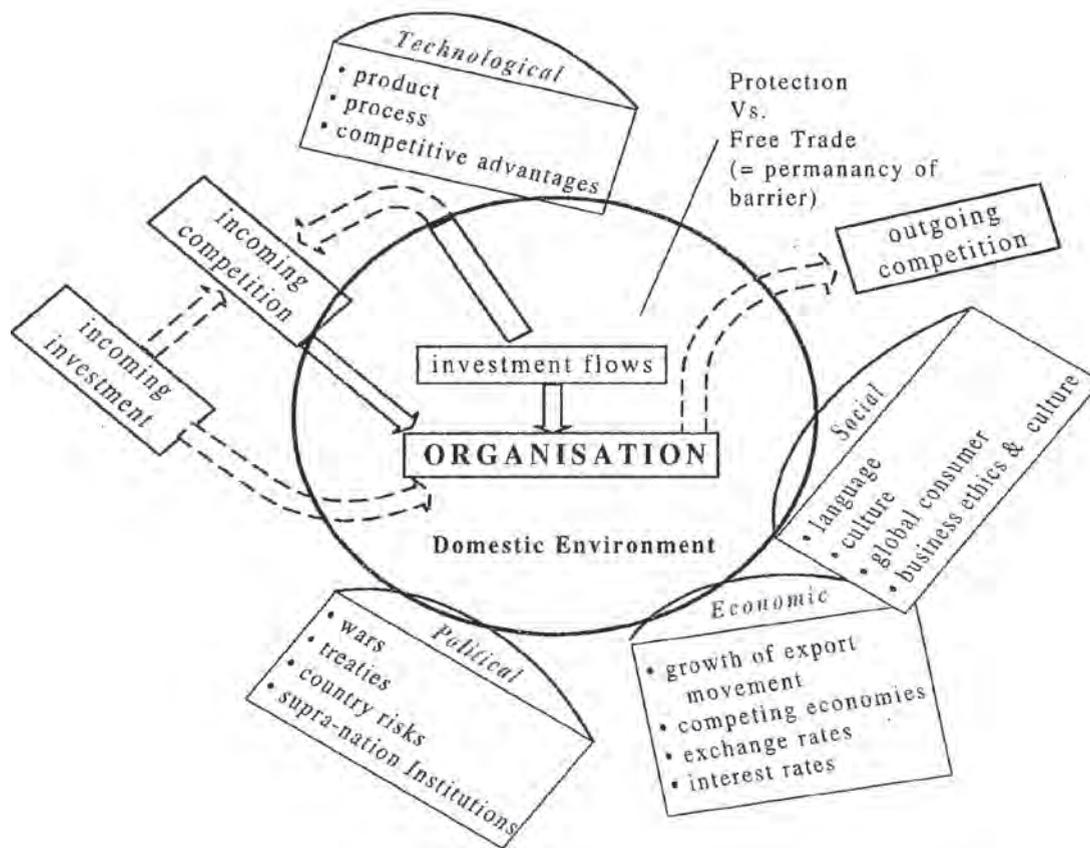
International business conditions are having an increasingly significant impact on organisations:

- They affect the nature of the industry.
- They affect the various position of different countries, the size and wealth of their markets and prosperity and efficiency of their productive bases.
- They affect the management, by governments or international institutions, of the frame work in which business is done.

The following diagram summarises international influences on the organisation in both domestic and overseas markets.

- (a) In times of increasing free trade, firms can expect incoming competition. That said, the possibility of competing abroad is also available.
- (b) Firms can source components from overseas.
- (c) Investment flows can also go two ways.
- (d) The barrier between the domestic environment and the international environment is relatively permeable, depending on:
  - the product
  - the relative openness of the market for the product or of the economy, as a whole
- (e) Political factors include political conditions in individual overseas markets or sources of supply, relationships between government and the activities of supra-national institutions.
- (f) Economic factors include, for each country
  - the overall level of economic activity and prosperity
  - the relative level of inflation on the domestic and overseas market
- (g) As well as obvious factors such as language, social and cultural factors include the following:
  - cultural practices, the different levels of education and literacy, religious beliefs and practice and the role of women.

## International Environment



**Fig. International influences on the organisation**

- the media and distribution systems in overseas markets.
  - the differences of ways of doing business.
  - to what extent should the product be adopted to local tastes? Or are customer's needs, the same everywhere?
  - different ethical views
  - how are local operations to be managed? Expensive expatriate staff to ensure central control? Local managers to ensure flexibility?
- (h) Technological factors
- the degree in which the firm can imitate the technology of its competitors.
  - a firm's access to domestic and overseas patents
  - intellectual property protection, which varies in different countries
  - technology transfer requirements
  - the relative cost of technology compared to labour



## The Competitive Advantage of a Nation's Industries:

Some people talk of a competitive advantage of nations. Do some nations succeed more than other in terms of international competition? A competitive nation, Porter assumes does not exist. The only meaningful measure of national competitiveness is the productivity and effectiveness of this industries.

- No nation can have competitive industry in every product.
- International competition helps to upgrade national productivity.
- Rising exports, combined with high living standards in a country result when the exporting industries are ones with high levels of productivity.

Although countries or nations are not as such are competitive, Porter asks:

- Why does a nation become the home base for successful international competition in a industry?
- Why are firms based in a particular nation able to create and sustain competitive advantage against the worker's best competition in a particular field?
- Why is one nation often the home for so many of an industry's world leaders?

These questions are important, Porter believes, because national origin is a crucial factor in influencing an individual firm's competitive stance especially in international markets. Porter seeks to isolate the national attributes that foster competitive advantage in an industry.

Porter states that the competitiveness of a nation's industries over the long term can not be reduced to the following usual suspects.

- Macroeconomics
- Cheap labour
- Natural resources
- Govt. policies of export promotion
- Management practices
- The size of the home/national market

The original explanation for national success was the theory of competitive advantages. This held that relative factor costs in countries determined the appropriateness of particular economic activities in relation to other countries. Porter argues that industries which require high technology and higher skilled employees are less affected than low technology industries by the relative costs of their inputs of raw materials and basic labour as determined by the national endowment of factors. The reasons are as follows:

- Technological change enables firms to by-pass constraints on resources or can nullify the advantages of other firms elsewhere.
- Firms do not depend on their home country's endowment of a resource to become competitive.



- Competing on price is of fleeting benefit as it is only short term advantage.

In other words, Porter believes that competitive advantage is too simple, and a general concept explains the success of individual companies and industries.

### **Structural Analysis and Competitive Strategy:**

The purpose of the structural analysis is to diagnose the competitive forces and to identify the strengths and weakness of the firm vis-à-vis the industry, to help formulate an effective competitive strategy that “takes offensive or defensive action in order to create a defensible position against the five competitive forces.”

Structural analysis would enable a firm to answer such questions as:

1. How vulnerable is the firm against potential entrants? In other words, are there or how insurmountable are the entry barriers? Or, what measures can it take to ward off new entrants?
2. How serious is the threat of substitutes? What strategies should the firm employ against them?
3. What is the nature of supplier power? How to combat it?
4. How powerful are the buyers? How to deal with their bargaining power?
5. What are the strengths and weaknesses and strategies of the established competitors and how to cope with them?

In order to create a defensible position against the five competitive forces, Porter suggests the following competitive strategies.

1. **Positioning:** This means making such positioning of the firm that its capability provides the best defence against the existing array of competitive forces. This strategy can take the form of building defences against the competitive forces or finding positions in the industry where the forces are weakest.
2. **Influencing the Balance:** The strategy here is to improve the firm’s relative position through strategic moves that influence the balance of forces. As against positioning, where the strategy is basically defensive, here the strategy is offensive. In other words, this strategy seeks to do more than merely cope with the forces themselves; it is meant to alter their causes. For example, capacity expansion and scale expansion can enhance entry barriers.
3. **Exploiting Change:** The approach is to adopt appropriate strategy for the changing environment ahead of the rivals.

### **Government policies, Economic growth and Government expenditure:**

Economic growth may be defined as an increase in aggregate output of goods and services in a given period of time, normally a year. But aggregation of output in terms of physical units is not practically possible when different units of measurement are adopted. Therefore, it is measured in a common unit, i.e., money. But the value of money changes with changes in the



price level. The real output of a given period can be calculated by neutralising the effect of price changes. The method of adjusting the total output for a given period in terms of prices of the base year is as follows:

$$\text{Aggregate Product at Consumer Prices} = \frac{\text{Aggregate Product at Current Prices}}{\text{Price Index of the Current Period}} \times 100$$

In India, the directive principles of the state policy constitute distinctive features of our Constitution. These principles embody certain ideals and objectives which should be kept in mind by the Union and state governments of the country while making laws and implementing policies. Equitable distribution of wealth, employment for all, protection of health, compulsory education for children up to the age of fourteen and establishment of village panchayats are some of these principles. Article 39 (b) and (c) of the Constitution of India directs the state to secure that the "ownership and control of the material resources of the community are so distributed as to best sub serve the common good" and that the economic system does not result in the concentration of wealth and means of production to the common detriment. Attainment of these objectives is fundamental to the economic growth and growth of public enterprises as the presumption was that public enterprises alone would help achieve these objectives.

Government expenditure towards development and maintenance of infrastructure is necessary for industrial and economic growth of any country. These include facilities of railway transportation, expansion of national highways, state highways, district roads, development of sea ports, airport terminal facilities, availability of electricity in all parts of the country through planned generation, transmission and distribution of power, supply of power and fertilizers to agricultural sector at subsidised rates, government support for establishment of industries in remote areas and underdeveloped regions with incentives of five-year tax holidays with ready infrastructure at government cost and development of small-scale industries, cottage industries and ancillary units.

After Independence with the advent of centralised planning, there has been progressive expansion in the industries, business, trade and commerce which led to the expansion of public enterprises and their contribution to economic growth is very much significant in different five-year plans.



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## PART - C

### Major Contents of Part C includes:

- Public and private sector investments

Public sector investment depends mostly on the government's budget resources and planned outlays in consideration of resources and requirements. According to the present investment system, public sector investment integrates with the five-year plans. Public undertakings are mainly financed either through grants as equity capital or loans by the government. The internal resources of public enterprises are part of the plan resources, irrespective of the fact whether investments are financed by internal resources or from the national budget and planned outlay. So, the public sector investment plans and proposals for the budget need approval of the government.

Investment proposals for establishment of new projects and units emanate either from the ministries and concerned departments of the government or from the enterprise proposing new projects for expansion and growth.

The broad nature of investment is determined by the priorities highlighted in the national plan. The government exercises a measure of control on the size and pattern of investment in public sectors by reserving to itself the power to approve capital outlays exceeding certain financial limits. It also exercises control over such investments through scrutiny and approval of the annual capital budgets of the various PSUs.

Investment proposals of the public sector undertakings are examined by different government bodies and agencies, including the Project Approval Division of the Planning Commission, Bureau of Public Enterprises. They are also studied by the Plan Finance Division for financial evaluation and economic appraisal.

### **Private Sector Investment:**

Investment decisions relate to the selection of assets in which financial resources will be utilised by a company. The assets which can be acquired are generally categorized into two major groups:

- Long-term assets which yield a return over a period of time in future;
- Short-term or current assets, which in the normal course of business are convertible into cash usually within a year. So, the decision for selection of assets of a company is two-pronged. The first involving long-term assets refers to capital budgeting. Financial decision making in relation to current or short-term assets falls under the purview of working capital management.

There is a basic difference between the procedures of investment and financing of the capital structure of public undertakings and the private sector. Requirements of fund for private sector



investment are met mostly by floating shares and debentures in the market and by borrowing from specialised commercial institutions. The fixed and working capital requirements of private sector organisations can be met by

- (i) Public Issue of Shares – Ordinary and Preference
- (ii) Issue of Debentures
- (iii) Loans from Special Credit Institutions
- (iv) Loans from Banks
- (v) Credit from Suppliers of Plant and Machinery and Other Materials
- (vi) Ploughback of Profits

The decision for the public issue of shares, debentures, loans and determination of the Capital structure has to be taken by the Board of Directors.

Earlier, according to Industrial Policy Resolution of 1948, private sector investment was restricted and limited to certain areas only while the core industries, critical and strategic industries and the infrastructure were within the purview of the public sector only. Now with the policy of liberalisation, almost all industrial sectors (except manufacture of arms and ammunition, atomic research, mint and rail transport) have been opened up for private investment. For example, core sectors such as power, oil and petroleum, mining and telecom have already been opened up for private sector. Investment by private sector in areas like airlines, export processing zones, road building, banking, insurance and other important sectors such as transport and service are also allowed. Private and public sectors are to operate alongside for economic and industrial development of the country.

Major objectives of the new industrial policy package are to build on the gains, correct distortions or weaknesses that might have crept in, maintain a sustained growth in productivity and gainful employment, and attain international competitiveness. The pursuit of these objectives will be tempered by the need to preserve the environment and ensure efficient investment and use of available resources. All sectors of industry, whether large, medium or small, belonging to public or private sector are encouraged to grow and improve on their past performance. To simplify the investment procedure industrial licensing has been abolished for all industries, except those specified, irrespective of levels of investment.



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## PART - D

### Major Contents of Part D:

- International trade practices and Government policies for capacity expansion, new industries, subsidiaries and substitutes

### **International trade practices and Government policies for capacity expansion, new industries, subsidiaries and substitutes:**

International Trade is concerned with exchange of goods and services in freely convertible foreign currencies. Any distortion in supply and demand balance could upset the stability of the price at which international transaction takes place. Of course, the eco-political factors and governmental regulations play a significant role in creating imbalances in price mechanism. The ups and downs of the global prices tend to have direct bearing on the economy of the country in several ways, depending on the comparative strength and weakness of the nation's economy. Steady and/or substantial changes in the international prices trigger chain reactions that force the government of a country to consider the following options in countering price upsoaring or downsoaring to insulate against adverse effects on the economy.

- Scope for expanding the existing production capacity or diversifying into other products to take advantage of the international market demand based on core competence and specialisation; conversely to decide on downsizing the production base if the international prices are attractive for import.
- Possibility of enlarging the production base of various products by setting up new industry within the country, both for meeting the gap in the international demand or cutting down inflow of imports for domestic use.
- Prospect of establishing subsidiaries of a renowned foreign manufacturer or transitional outfit on equity and/or technology tie-up basis.

Generally, the upsurge in the prices in the domestic market is, by nature, inflationary and several fiscal and monetary measures may be required to be taken by the government of a country and could lead to the opening up the national economy so that production is stepped up, productivity improved, industrial and trade policy relaxed and the national health is in shape. However, the urgency to set up new industry, expand the present production capacity, develop subsidiaries and substitutes will also have to take into account the national priorities and preferences, its strength and weakness, opportunities and threats, its goals and plans.

Even then, be it expansion or creation of a new unit or setting up subsidiaries or substitute production in new units, the increase in productive activities will require:

- Flow of investment by way of equity and/or loan to public or private sectors.
- Tie-up for technology transfer, systems absorption of cost effective know-how not available within the country.



3. Relaxation/amendment of the existing industrial trade and finance policies of the government to make way for inflow of investment and technology.
4. Amendment of the patent laws to meet the requirement of Item 3.
5. Ascertaining the optimum scale of operation to keep the cost minimum to match world prices.
6. Modernising and/or providing infrastructural facilities within a timeframe as back-up support for such endeavours.

In this era of liberalisation, a constant monitoring of prices prevailing for various products in the international market leads to an obvious inference that any fluctuation in prices reflects the fluctuating supply and demand syndrome of the product globally. Let us cite an example: A gradual upward movement in the prices of, say, zinc in the international commodity market will mean either there is a fall in the availability of stocks, or the demand for zinc at that period was increasing against certain volume of supply. Apparently, in both the cases, the government of a country may consider exploring the possibility of stepping up indigenous production capacity or allowing private and/or public enterprises to set up an indigenous production base subject to a feasibility study on a long-term supply-demand appraisal not only to meet the internal but also external needs and to take advantage of the rise in demand. At the same time, the users may force their foot to allow entrepreneurs to develop suitable substitutes or enter into an alliance with suitable foreign parties to establish subsidiaries to produce the product. However, before a decision is taken a thorough investigative analysis and evaluation will be required to be taken to assess if the spurt in zinc price is the outcome of a speculative pull and push or a natural inter-play of the market forces.

One other issue that can have an effect on deciding a government policy regarding setting up of substitute production is the possibility of the ultimate non-availability of natural key resources, e.g., crude petroleum, or a rather inadequate reserve of a key product like nickel all over the world. In both the cases, the imperativeness to sustain the production of these products for downstream uses could compel the government to look inward and outward for locating sources, exploring patentable conventions and discovery of a suitable substitute as the prices of these key materials will become too prohibitive in the long run and could upset the production of many important products using these key materials.

In today's dynamic and currently oriented international business scenario, the economy of a country is closely inter-dependent with other countries in some way or other. In the increasingly open market, several issues have attained added importance in shaping any country's governmental policies – emergence of WTO in-international trade policy for free market access, reduction in customs tariff, inter-play between national and international legal systems, faster communication, interchange and collection of various data on availability, price, quality and sources through Internet/E-Mail, all pervasive hold of environment of information technology, emergence of world bodies unifying trade practices and procedures. All these have made it difficult for the government of a country to go along in formulating any policy on capacity expansion, new industry, subsidiaries and substitute purely on the national priorities.



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## STUDY NOTE - 3

# Model Building and Models

### PART - A

#### Major Contents of Part A:

- Models and Modeling ,Uses of models, Types of Model

#### **Models and Modelling:**

A model can be defined as an abstraction of the real system, which permits the exploration of the behaviour of a system under various different circumstances. Managers construct models in order to foresee what might happen, to make policy decisions and planning decisions, and to help with establishing controls over the system.

The term 'simulation model' is used to describe any model which somehow represents a 'real' system. The main type of simulation model strategic planners and marketing manager's use is a symbolic or mathematical model, in which variables in the 'real' system are represented by mathematical symbols and equations.

#### **Uses of models:**

Examples of models include a balance sheet, a linear programming model, a DCF net present value statement and a budget. Many models which are built relate to a particular area of a company's operations.

- (a) Market models which may be used to forecast sales demand. The variables affecting demand include:
- past and current sales, where trends or cycles are discernible;
  - market conditions - i.e. size of the market, market segments, taxation, new technology;
  - consumer spending patterns;
  - competition;
  - sales promotion and advertising expenditure;
  - market research findings, product design and development, etc.

These variables must be identified, quantified and set in some mathematical relationship with each other, so as to build a sales forecasting or market model.

- (b) Cost prediction models and financial models (e.g. cash flow models).



- (c) Transportation models, or models to help decisions about siting factories, warehouses etc.
- (d) Departmental models, covering the design of products, production scheduling and control, stockholding, distribution and sales within a department or division of a company.
- (e) Technical models used, for example, in product design.

Higgins cites the case of an insurance company that made extensive use of computers in its corporate planning and control systems. In addition to its basic 'essential' information system the company developed computer-based financial, taxation and economic models.

- (a) The financial model was found to be particularly useful for the quick appraisal of the effects on the business of inflation.
- (b) The taxation model was used in developing arguments for negotiations with the Inland Revenue authorities.
- (c) The econometrics found employment in making the company's management aware of the impact of economic trends on the company's activities, and in producing 'initial scenarios' in its planning processes.

#### **Computer can be used in strategic planning.**

The following model may be considered:

- (a) Product life cycle models, to help strategic planners and marketing managers to assess the likely remaining life cycle of a product.
- (b) Models for analysing an organisation's product-market mix or market share/market positioning strategy, perhaps along the lines of a product portfolio matrix.

#### **The Stages in Model Building:**

The broad stages in model building are as follows.

- (a) Identifying the principal variables in the business situation, and describing the relationship between them.
- (b) Translating these relationships into mathematical terms.
- (c) Providing a system of collecting quantitative data for each variable.
- (d) Applying the data to the model to produce the required management information, or programmed decision.

The purpose of such a model is to provide better information, which in turn should improve the general quality of decision-making, and so ensure that the resources of the business are used economically. The value of a model should be measurable in terms of greater revenue or reduced costs. Since the objective of a model is to increase profits by improving decisions, it is essential that it should be based on accurate assumptions and be a reliable guide.

In a large organisation, however, it is unlikely that any individual will know enough about all the factors influencing a particular business situation. Even in a simple economic batch



quantity model, it is unlikely that any single department knows enough about each of the following variables which are included in the model.

- (a) Demand for each item (stores or production planning dept information).
- (b) The cost of ordering (purchasing dept information).
- (c) The running costs of holding items in stock (stores dept).
- (d) The interest costs of stockholding (finance dept).

A big problem in model building is to bring together all the data/variables from various sources. All variables in a model must be quantifiable, but quantification may be difficult (and conceivably impossible).

- (a) Output produced, hours worked, materials consumed, levels of scrap, machine breakdowns or labour turnover, etc. are readily measurable. Variables can be measured as units or as a ratio (e.g. stock turnover periods).
- (b) Some qualitative information may be turned into quantitative measures; for example quality of output, up-to-datedness of product range, customer loyalty, consumer response.
- (c) Other information may be more difficult to quantify, especially where environmental factors and human attitudes are involved. For example, employee dissatisfaction or personal quarrels, the effectiveness of advertising or attitudes of suppliers may be important variables, but unmeasurable.

Where every variable is quantifiable and is included within the model, the model may be used either for programmed decision making, or as an aid to a manager who will then use his judgement as well as the information provided, to make his decision.

When a model excludes any variable (perhaps because it is a 'qualitative factor') it can only provide a part of the information necessary to reach a decision.

Since every business situation is dynamic, any model must be continually reviewed to ensure that it remains capable of accurate predictions or conclusions. A dynamic model means that the model will be continuously changing, either because new data are input to keep its parameters up to date or because new specifications are made to alter the model design. As the model is updated with current data, it will be able to produce new output forecasts on request for whatever corporate strategy the model user wishes to test.

## Types of Model

### Simple and complex models:

When models are first constructed, they are usually very simple, with only a few input variables, probably with deterministic values, and with only a few output 'results' or 'predictions'. If the simple model appears to provide a reasonable simulation of the system it is trying to represent, and if it works well in practice, the model-builders might then try to add more detail and complexities into the model.



For example, a cost-volume-profit (or breakeven) model at its most simple is as follows.

$$P = S - V - F;$$

Where; P is profit, S is sales revenue, V is total variable costs and F is total fixed costs.

A more complex CVP model would be as follows.

$$P = (S_1 - V_1) q_1 + (S_2 - V_2) q_2 + \dots + (S_n - V_n) q_n - F$$

Where  $S_1, S_2, \dots, S_n$  represent the sales price of product 1, product 2 ... product n in the sales mix;

$V_1, V_2, \dots, V_n$  represent the variable cost per unit of each product in the sales mix;

$q_1, q_2, \dots, q_n$  represent the sales quantities of each product.

Potentially, more complex models provide more useful information for the model user.

### Descriptive models:

Descriptive models, as their name suggests, are intended to describe what will happen given a certain set of assumptions, and how the outcome might differ if any of these assumptions were changed.

Often referred to as 'What if?' models, they seek to show the impact of changes such as increases in raw material prices, increases in sales volume or decreases in sales price. Most descriptive models are financial, the data being expressed in terms of financial results such as costs, profits, capital availability and potential for retained earnings, and various performance indicators, such as earnings per share, dividend per share, ROCE, debt/equity ratios.

There are some descriptive marketing models available, such as the following.

- (a) A macromodel for a market as a whole, that relates total market sales as an output variable to independent variables such as national income, average market price, and company advertising expenditures.
- (b) A more specific microanalytic marketing model for an individual company, such as a model where the effect of advertising expenditures on total sales is explained by considering the interaction of variables such as the level of advertising expenditure, with the number of advertising exposures, reach and frequency, advertising awareness and consumer trials etc.

As mentioned earlier most descriptive models are confined to single aspects of organisational activity with the emphasis on financial aspects, possibly because financial results are quantitative and so the jump into modelling from 'reality' is across a much narrower gap. You may be aware of various descriptive models from your own work experience, but as an example, since 1973 British Rail has been using a small model known as PLATO, which manipulates the financial and physical data from the main Rail Plan by using simple 'What if?' variations in selected key variables, such as the impact of price changes on traffic volumes.

**Strategic Planning Models:** Strategic planning models are sometimes referred to as business planning models, approach to strategic planning, and are for an organisation to do the following:



- (a) Decide on its objectives and strategic targets.
- (b) Forecast how they are progressing towards achieving these targets, on the assumption that the organisation carries on as it is doing at the moment, and establish the size of the gap between the forecast achievements and, the targets.
- (c) Develop ways of closing the gap through strategic changes.

Forecasting what will happen in the future calls for data about the organisation itself and its resources, i.e. internal data, and also external environmental data. Large quantities of data are needed to make reasonably reliable forecasts, and the value of computer databases might seem obvious in this context.

In large groups of companies, it is not uncommon for the strategic planning process to begin at the subsidiary company level, or sub-subsidiary level, with individual companies preparing their own business plans using a strategic business planning computer model, and then for the plan to be fed into the planning model of the parent company, which can co-ordinate the plans of its different subsidiaries, and amend them as necessary. Modelling helps to speed up the co-ordinating and decision-making process between companies in the group.

**Heuristic Models:** Heuristic models, are models that do not provide an optimal solution, but which help the planner to work towards a satisfactory set of planning decisions by testing out (with the model) a large number of alternatives and options. Because a large number of alternatives are evaluated, computers are essential for heuristic modelling.

Many business plan models are heuristic in character, because they can be used to test out a large number of possible choices, and work towards an overall strategic plan that appears to be more satisfactory than anything else that can be devised.

**Scenario Building:** Scenario building is used in strategic planning. It can be described as the process of identifying alternative futures, i.e. constructing a number of distinct possible futures permitting deductions to be made about future developments of markets, products and technology.

Such models include simple surprise-free extrapolations, creative thinking such as brain storming, systems models such as the MIT World Model, and the Delphi model.

This involves a panel of experts providing views on various events to be forecast such as inventions and breakthroughs, or even regulations or changes over a time period into the future. Within the context of the time period, probability weightings are then applied to the possible outcome of events. While this is little more than quasi-quantified informed opinion, it is nonetheless helpful in strategic planning when an organisation is endeavouring to define objectives and constraints over specific time scales.

From a more general standpoint, McNamee has outlined a seven point approach to scenario planning.

- (a) Develop a data base. Any modelling must have access to a sufficient database. Let it suffice to say here that it should include data about both the organisation itself and the environment.
- (b) Develop a strategic profile of the organisation, i.e. establish its culture and style of



leadership etc. Strengths and weaknesses analysis and gap analysis may be an element of this exercise. Much of the data will be highly quantitative; financial values, physical resources in terms of raw materials, skilled headcount, market share, cash and potential for increased gearing etc.

- (c) Develop a profile for the environment. The Delphi technique is one way of doing this. Much of the public sector has been faced with greater competition from private sector organisations, against a background of government policy that has been alien to traditional public sector thinking and culture. Privatisation has emerged as a strategy for many public sector organisations to develop.
- (d) Test the impact of the environmental element upon the organisational element. Essentially this means bringing the environmental factors and internal strengths and weaknesses together in order to assess strategies that are under review.
- (e) Analyse further the elements revealed by the analysis in step (d). For example, a power supply company in a sunshine state of the country may identify the growth of the population in its territory. This may need further analysis as to the population's profile, and what its requirements might be. Population growth may just be the result of older people migrating towards the sunshine on retirement, or else it might be part of a more general population movement towards the sunshine states, bringing with it a growth in commercial and industrial customers. The nature of the population growth would have implications for the power supply company in terms of planning capacity, e.g. how long can the company continue to use imported power from a neighbouring state? When is the latest time to take decisions about capacity expansion? Most important, how may this capacity expansion be undertaken bearing in mind the environmental lobby groups and possible resistance to the use of coal (sulphur emissions) and nuclear power.
- (f) Repeated testing of the information revealed by the first analysis. Plans are rarely finalised at the first attempt, and it is not unreasonable to assume that this process may have to be repeated several times.
- (g) Select the final strategy subject perhaps to the constraints of suitability, acceptability and feasibility.

Econometrics is the study of economic variables and their interrelationships, using computer models. Short-term or medium-term econometric models might be used for forecasting. Such models, incorporating mathematical techniques such as regression analysis, may well be more accurate for medium-term forecasting than long-term trend projections based on scenario building.

### **Mathematical Programming Models (Optimisation Models):**

Once long-term forecasts have been made, and the framework of strategic plans agreed, managers will know what assumptions they are expected to make about future environmental conditions and resource availability. Given such assumptions about the constraints within which the organisation will be operating, other types of models, referred to collectively as either mathematical programming models, or optimisation models, can be used.



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## Examples of Optimisation Models:

- (a) Linear programming models, which seek to maximise the value of an objective function (e.g. profits, or sales revenue) or minimise its value (e.g. costs), given certain constraints, such as a known limitation on the availability of resources.
- (b) Economic order quantity models, which seek to minimise costs of stockholding by identifying the least-cost size of order for raw material and component supplies, or for production quantities in batch production system.
- (c) Critical path analysis, or PERT analysis, which seeks to minimise the timescale for completion of a project, perhaps within the framework of resource limitations and/or cost controls.

A context of marketing and distribution, queuing models can be particularly useful. A queuing model seeks to identify the waiting time in any system, and how might it change if service facilities are altered. This is of particular importance to supermarkets, gas stations and any other service industry where customers must queue for service; so that any excessive time those customers are kept waiting can result in loss of trade. Equally, in the context of distribution, the time vehicles have to wait to unload may mean more vehicles required to provide the service.

## Budget Models:

A budget is a model for a medium-term plan. A budget model can be computerised, quite possibly using a spreadsheet package on a microcomputer in the case of smaller organisations.

A budget might be formulated from information provided by other optimisation models (e.g. a linear programming model might indicate the profit-maximising production budget for a manufacturing firm). Advocates of the use of modelling would argue that budgets are a leading example of the benefits of modelling for management, both for the planning and the control of the organisation's resources.

Budget models allow managers to assess the benefits of alternative plans, or to carry out sensitivity analysis to test the effects of what would happen if certain variables turn out differently from the way assumed in the budget. Computerised models allow managers to change their assumptions and re-formulate their budgets quickly, by making minor input amendments to the data.

A budget is often the means whereby managers' performance is measured and controlled, and so the process of formulating the budget is likely to involve lively debates, even arguments, between operating managers, senior management and accountants. Many different courses of action will be available, and managers will want to think through as many different options as possible, and to evaluate them, before they finally agree the budget. Unless this process of debate and evaluation takes place, the budget will be resented as an 'accountants' budget' imposed on them from above. The use of budget models gives managers the flexibility to incorporate such discussions and evaluations into the budget process, without making it too cumbersome or time-consuming.



Budget models can also be used for management control. If a budget has been prepared using a computer model, it is usually a simple extension of the model to include a facility for recording actual results, period by period, and to produce budgetary control reports.

### **Ad hoc Decision Models:**

A further type of model is a decision model, which can be used to enable managers to make 'ad hoc' or 'one-off' decisions, as distinct from routine and repetitive decisions such as budget planning. Examples of decision models are as follows:

- (a) DCF models for capital expenditure appraisal.
- (b) Lease versus buy decision models.
- (c) Models to enable decisions to be taken about new products or new markets.
- (d) Shutdown decision models to decide whether or not to close down an operating division.
- (e) Models for sell-off decisions or acquisition decisions, where a company is faced with an unforeseen opportunity to sell or acquire a new subsidiary.
- (f) Game theory models. Game theory is a form of statistical decision-making technique for marketing decisions, involving an assessment of different courses of action, given uncertainty about the competitive measures or responses that might be taken by major competitors to any course of action taken by the organisation.



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## PART - B

### Major Contents of Part B:

- Sensitivity Analysis
- Deterministic and Stochastic Models
- Behavioural Models

### **Sensitivity Analysis:**

Different managers will have different assumptions and views about what they think will happen or ought to happen. Operating managers, for example, frequently disagree with accountants. All of them will want to see the effect on the outcome of future events if things turn out better or worse than expected. This can be done either with sensitivity analysis or with risk analysis.

Sensitivity analysis involves asking 'what if?' questions, it is a modelling procedure used in planning; changes are made to estimates of the variables to establish whether any will critically affect the outcome of the plan.

By changing the value of different variables in the model, a number of different scenarios for the future will be produced. For example, wage increases can be altered to 10% from 5%; demand for a product can be reduced from 100,000 to 80,000, the introduction of new processing equipment can be deferred by six months, on the revised assumption that there will be delays, and so on.

One form of sensitivity analysis is to produce 'worst possible outcome', 'best possible outcome' and 'most likely outcome' scenarios.

Sensitivity analysis can be formalised by identifying key variables in the model and then changing the value of each, perhaps in progressive steps. For example, wage costs might be increased in steps by 5%, 7½%, 10%, 12½% and 15% and the effect on profits and cash flows under each of these five wage cost assumptions can be tested.

In this way, a full picture would emerge of how the achievement of planning targets would be affected by different values for each key variable. Once the most critical variables have been established, management then has a number of options.

- (a) Apply the most stringent controls to the most critical variables, to ensure that plans are achieved and the variable does not get out of control.
- (b) Alter the plans so that the most critical variables are no longer as critical. For example, if a car manufacturing company's marketing management are planning to stop producing an old model of car and switch production resources to an entirely new model, sensitivity analysis might show that its profitability will be critically dependent on the speed with which the new model gains acceptance in the market. If the risk seems too great, management might re-think their plans and opt to introduce the new model in smaller



numbers to begin with, and to continue producing the old model as well in some numbers until the new model is more established.

- (c) When different planning options are available, to choose a lower-risk plan. For example, if a Kolkata-based company has the choice of expanding its operations into either the rest of the India or into others and the low countries, it might find that Continental operations would offer prospects of bigger profits, but the risk of failure might be bigger too and so it might opt to expand in the India instead.

Sensitivity analysis can also be used from the other end, by starting with the minimum acceptable target for the organisation, and calculating by how much each key variable can change in value before the minimum targets are no longer achievable. For example, in a DCF model, the estimated net present value of a capital expenditure project might be estimated as +Rs.1.5 millions. Sensitivity analysis could then be carried out to assess what would be the maximum change in the value of key variables - such as the maximum increase in annual running costs above estimate, or the maximum reduction in annual sales volumes below estimate - before the project had an NPV of Re.0 and ceased to be viable. Management would then take a view on how likely it would be that these maximum variations in key variables might actually happen. If the risk seems too great, the decision might be not to go ahead with the project.

Like sensitivity analysis, risk analysis is more easily carried out with the aid of computer models. Risk analysis is an extension of sensitivity analysis. The various ways of carrying out risk analysis include the following.

- (a) Increasing the minimum acceptable target. In DCF analysis, for example, this would involve applying a higher discount rate to risky projects, perhaps using a beta factor based on Capital Asset Pricing Model assumptions.
- (b) Applying mathematical probability distributions to certain variables. Models which use probability distributions for risk analysis are sometimes referred to as stochastic models.

### Deterministic and Stochastic Models:

Deterministic model is a model in which the values of each 'input variable' are known with certainty, and the way in which the variables inter-react is also certain and predictable. For example, an economic order quantity model will be deterministic in the following circumstances.

- (a) If the cost of ordering, the cost of holding stocks per unit per period, the periodic demand for stock items and the re-order supply lead time are all known stated values.
- (b) If it is also predicted with certainty that stockholding costs are the stockholding cost per unit multiplied by one half the order quantity.

You may be familiar with the resulting formula for the economic order quantity

$$Q = \sqrt{\frac{2cd}{h}}$$

A stochastic model is one that recognises that some variables might have any value from a certain range of 'outcomes', although a probability distribution for such outcomes can be



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estimated and used in the model. For example, in a stock control system, demand for a stores item may vary from day to day, so that the demand variable may be quantified as:

- (a) Say,           0.2 probability of four units  
                      0.6 probability of six units  
                      0.2 probability of eight units;
- (b) Or, say, an average demand of six units per day with a standard deviation of 0.4 units.

Alternatively, the inter-relationship between variables can be expressed as a probability distribution; e.g. If A happens, then there is a 25% probability that B will happen and a 75% probability that C will happen.

A stochastic model could be designed to produce 'solutions' in one of two ways.

- (a) As an expected value, (or weighted average probability) with some statistical analysis of the possible variation around the EV.
- (b) As a range of possible outcomes.

### **Behavioural Models:**

Some experiments have been carried out to develop behavioural models for marketing which attempt to analyse and predict customer or buyer behaviour. They achieve this by recognising what factors influence a buyer's purchasing decision, and assigning a points 'score' or weighting to each factor within the behavioural model. They then assess how well the organisation's product: and marketing mix can tap the buyer's purchasing motives. The model can then be used to experiment with the marketing mix to decide what mix is most likely to be successful in creating sales.



## PART - C

### Major Contents of Part C:

- The Advantages and Limitations of Models

### The Advantages and Limitations of Models

In broad terms, the advantages of models are as follows.

- The ability to explore more alternatives
- Improved decision making
- More effective planning
- Faster decision making
- More timely information
- More accurate forecasts
- More extensive information and ready access to information
- Flexibility in the production of control reports, e.g. reporting by exception
- Cost savings, possibly as a result of the other benefits

The value of models depends on the following:

- How extensive the database is. Models rely on data, and so a comprehensive, up-to-date and accurate database ought to be built up on a computer file.
- Flexibility in the use of data on the database files. Computerised databases and many different software packages for accessing and using data are now available; although organisations might prefer to develop their own 'in-house' models.
- Their accessibility. Relevant data should be available to any manager who must make decisions, and should not be restricted to a small number of authorised personnel.

Peter Fitzroy, of Monash University, has noted that many marketing managers avoid the use of financial models. This he ascribes to the following three factors.

### Limitations of Models:

- The marketing environment is complex, ill-structured and so models that provide an accurate representation of reality and which include the appropriate control variables are difficult to establish.
- The mathematical techniques used in models, with their restrictive assumptions, can exaggerate this inadequate representation of the real world. (It can also be argued that



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these mathematical techniques take on an aura of accuracy that is just not there, which may therefore mislead managers and so make the techniques harmful rather than helpful)

- (c) The age-old problem of the skills of the user. A systems analyst may develop a model which is technically very impressive, but meaningless to the operations managers, with the result that it does not get used. The analyst may complain about management being unprogressive but the fault would be just as much with a failure by the analyst to be pragmatic when developing his model.

Fitzroy therefore gives two guidelines to the model builder.

- (a) A model must be understood by the manager who is to use it or be controlled by it, and he must have confidence in the output from the model.
- (b) It must be seen to be useful to the operations manager. To that end, it must focus on what he considers to be the true problem areas, and it must be complete in those areas of difficulty. It must also be logical, able to absorb subjective elements from the real operational world, and reflect current and future trends within its database.

Models provide planners with the ability to represent real life situations to help them to improve their understanding of the relationships between the variables. They can use the models to assist in forecasting events and to improve the quality and analysis of their decisions.

Although models have many advantages they do also have some limitations and model users should be aware of these limitations before using the models for planning and decision-making purposes.



## PART - D

### Major Contents of Part D:

- Product Life Cycle (PLC)
- Packaging Policies
- Porter's Generic Strategy
- Ansoff's Model
- Portfolio Planning
- BCG Matrix and Other Models
- Boston Matrix
- The Product/Market Evolution Matrix
- Hofer Matrix
- SPACE (Strategic Position and Action Evaluation)

### Product Life Cycle (PLC)

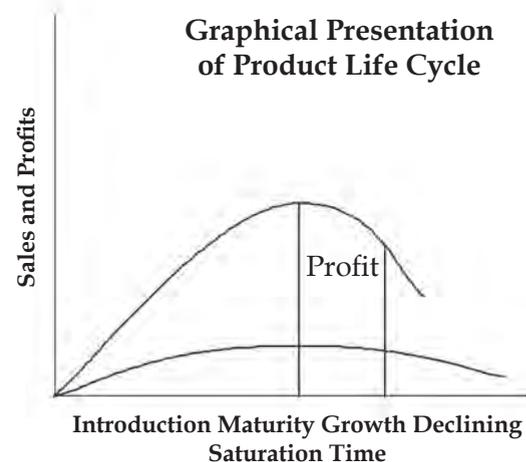
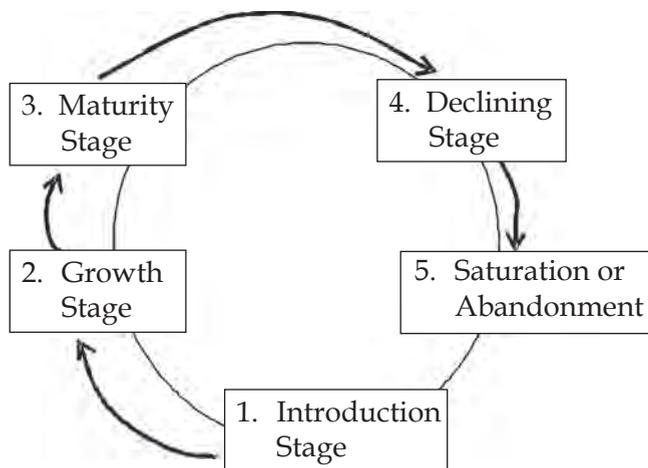
**Product Life Cycle Policies:** - The life cycle is a fact that of existence for every product. Similar to human, life cycle, the length of the life cycle, the duration of each phase and the shape of the curve vary widely for different products. The product life cycle should be termed as product market life cycle. The Product life cycle concept indicates that the product is born or introduced, grows, attains maturity and the point of Saturation in that market and then sooner or later it is bound to cut its declining-stage. Product life cycles will depend on the basis of styles, fashion and bad life cycles, national and international stages:-

- **Introduction:** In the early stage when the product is introduced in a market, sales revenue begins to grow but the rate of growth is very low. Profit may not be there as we have low sales volume, large plan and distribution costs. We may require heavy advertising expenditure and sales promotion weakness may be revealed and they may be promptly removed, cost of market development may be considerable. Skimming strategy of launching the new product at high price and high promotion level.
- **Growth stage:** It is the period during which the product is accepted by the consumers and traders. During the growth stage, the rate of increase in sales turnover is very rapid. Profits also increase. In spite of competition, we may have rising sales and profits. The firm gives top priority to sales volume and quality maintenance may have secondary preference.
- In this stage effective distribution and advertising are considered to be as key factors. Word of Advertising seals to more new users. Repeat orders are secured familiar with products; competitors enter the market, more profits. It is ideal period for the markets.
- **Maturity:** During this stage keen competition brings pressure on prices. Increasing marketing expenditure and falling prices, reducing profits. Symptoms of declining.

Additional expenditure is involved in product modifications and improvement or broadening product line, Marketers have to develop or adopt measures to stimulate demand and face competition through additional advertising and sales promotion.

- **Saturation:** The saturation stage comes into the market when all potential buyers are using the product and we have only replacement sales. Consumption achieves a constant rate and the marketers have to concentrate exclusively on a light so market shares High expenses, prices may fall and less profits etc.
- **Decline stage:** Once the Peak or Saturation stage is reached. Product inevitably enters the decline stage, and becomes obsolete. It may be gradually displaced by some new innovation, Sales drop severely, competition dwindles, and the product can not stand in the market. It may be priced on the market by the other innovations. At this stage price becomes the primary weapon of competition, and we have to reduce considerably expenditure on advertising and on sales promotion cost control becomes the Key to generate profits.
- **Abandonment Stage:** At this stage the product is completely abandoned in the market. In real life many-products do not follow the life cycle like this e.g., Sale requires to be in maturity stage for ever. Big Radios have now moved to declining stage after achieving maturity and Saturation after the invention of transistor. New products are the real solutions to the Problems of maturity and decline.

### Dramatical Presentation of Product Life Cycle



**Packaging Policies:** Once the decision taken on the brand we have to consider the design and the makeup package and the labelling of the package. Modern methods of packaging are valuable to the markets to establish his branded Products as distinct from those of his rivals.

Packaging may be defined as the general group of activities in the planning of a product. These activities concentrate on formulating a design of the package and producing an appropriate and attractive container or wrapper for a product. The container itself can act as a force to purchase or effective medium of advertisement for buying. Many a time, package design itself can act as a registered brand. Packing is necessary to prevent flowing out such liquids as milk



drinks etc. It is essential to maintain freshness and quality e.g. Ghee, Snacks etc. It can prevent the danger of adulteration e.g. butter, cheese, edible oil etc.

A good package assures ultimate success of the product as a commercial venture. The package is an important informational one to the buyer. Recognition of the product under keen competition.

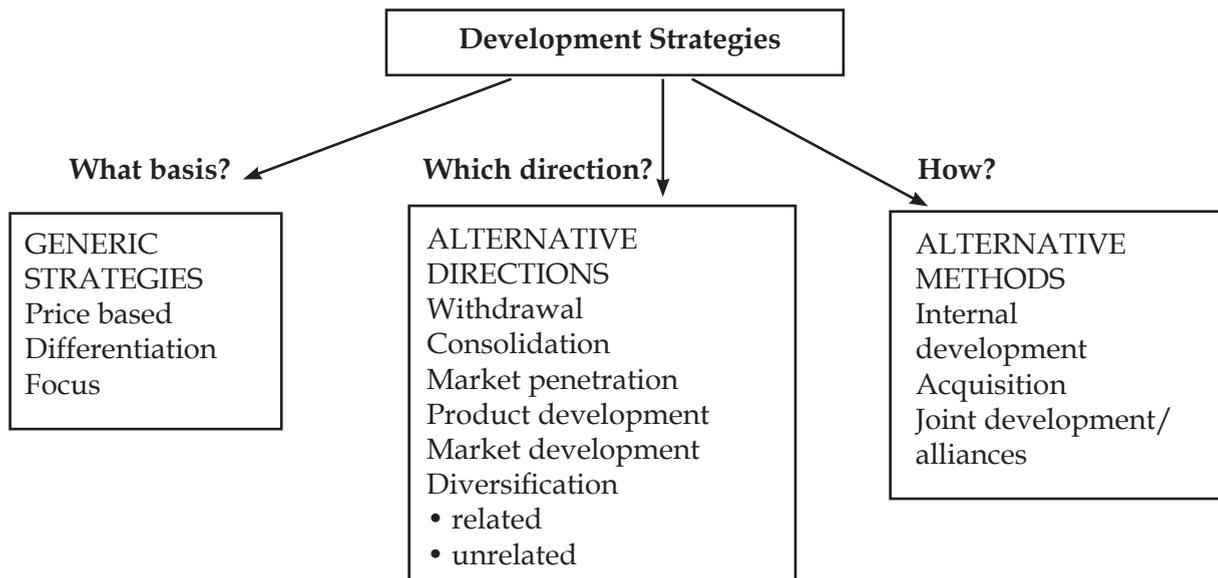
**Features of Packaging:**

- (1) Packaging is a Sales tool.
- (2) Packaging identifies maker as well as the product and carries the brand name.
- (3) The packaging label informs the buyer about the inner contents and its use.
- (4) It is the biggest Advertising media.
- (5) It encourages impulse buying.
- (6) It establishes product image.

**Functions of Packaging:**

- (1) Protection: - The product demands protection until it is used. It prevents damage or loss during transport and ware housing.
- (2) Easy Handling: - Modern packaging facilitates easy handling and movement during the Process of distribution. Packaging as a part of physical distribution function should result in.

**Porter’s Generic Strategy:**



**Figure: Development strategies**



**Generic Strategies:** Specific strategic options for development are most usefully considered in the context of the overall generic strategy which an organisation is pursuing.

For commercial organisations the discussion in this section is concerned with establishing the basis on which a company can build and sustain competitive advantage. For public-service organisations it is concerned with an equivalent issue, the basis on which the organisation chooses to sustain the quality of its services within agreed budgets - how it provides 'value for money'.

**Porter's Generic Strategies:** Since the publication of *Competitive Strategy* in 1980, the debate about the importance and relevance of generic strategies has become an important influence on the development of organisations' strategies. Porter's arguments have, in effect, entered the language of management. However, conceptual and practical problems in the formulation and, particularly, the operationalisation of generic strategies have become apparent.

Porter argued that there are three fundamental ways in which firms can achieve sustainable competitive advantage. These are shown in Figure as follows:

- **A cost leadership strategy**, where a firm sets out to become the low-cost producer in its industry. A low-cost producer must find and exploit all sources of cost advantage. Low-cost producers typically sell a standard, or no-frills, product and place considerable emphasis on reaping scale or absolute cost advantages from all sources. If a firm can achieve and sustain overall cost leadership, then it will be an above-average performer in its industry provided it can command prices at or near the industry average.
- **A differentiation strategy**, which Porter defines as seeking 'to be unique in its industry along some dimensions that are widely valued by buyers'. It is rewarded for its uniqueness with a premium price. A firm that can achieve and sustain differentiation will be an above-average performer in its industry if its price premium exceeds the extra costs incurred in being unique. The logic of the differentiation strategy requires that a firm choose attributes in which to differentiate itself that are different from its rivals.
- **A focus strategy** based on 'the choice of a narrow competitive scope within an industry. The focuser selects a segment or group of segments in the industry and tailors its strategy to serving them to the exclusion of others.' There are two variants here. 'In cost focus a firm seeks a cost advantage in its target segment, while in differentiation focus a firm seeks differentiation in its target segment.'

Porter goes on to argue that, for a firm to ensure long-term profitability, it must be clear as to its fundamental generic strategy in the terms he describes: too many firms do not make the important choice between these three strategies and end up being 'stuck in the middle'.

### **Some Problems with Generic Strategy Concept:**

The generic strategy concepts are important because they have provided managers with ways in which they can think about competitive strategies and competitive advantage. However, in trying to translate the concepts into actionable strategy some significant problems have arisen.



**Competitive Advantage**

	Lower cost	Differentiate
Board Target	1. Cost Leadership	2. Differentiation
Competitive Target		
Narrow Target	3A Cost focus	3B Differentiation focus

**Fig. Three generic strategies**

**The Notion of Cost Leadership:**

There are problems linked to the notion of sustainable cost leadership. Porter does not mean short-term cost advantage, or just low cost. Sustainable cost leadership means having the lowest cost compared with competitors over time. This is unlikely to be achieved simply by pruning costs: competitors can and will do that too. The question, then, is how competitive advantage can be achieved - if at all - through cost leadership.

It has been argued that cost leadership can be achieved by means of substantial relative market share advantage because this provides a firm with cost advantages through economies of scale, market power (for example, buying power) and experience curve effects. However, it is not clear what 'substantial relative market share advantage' means. Different proponents argue that it means share relative to the nearest one, two or three competitors; and there are differences in views on what level of relative share advantages might be required.

In developing strategy, it is in any case dangerous to assume a direct link between relative market share advantage and sustainable advantage in the market because there is little evidence of sustainability: dominant firms do lose market share, and others overtake them. Market share itself is not what is important; but rather the advantages that it can bestow. Certainly relative share advantage, can and should give cost advantages, but if managers do not manage the business to achieve these advantages, they will be lost and smaller-share businesses will catch up and overtake them.



Porter also describes the idea of cost leadership as if it is applicable across a whole industry as well as being applicable in market segments. This is a very important distinction. If the idea of cost leadership is to be taken seriously as an industry-wide strategy, it is problematic for all but a very few firms - indeed, arguably in a given industry, for all but one firm. It is therefore not a strategy which is generally applicable across an industry.

Porter has used the terms 'cost leadership' and 'low price' as though they are interchangeable. This cannot be: cost is an input measure to a firm, whereas price is an output measure. Because a firm is pursuing a cost leadership or cost reduction strategy, it does not necessarily mean that it will choose to price lower than competition. For example, it may choose to invest higher margins in R & D, or marketing - arguably what Kelloggs or Mars do, for example; and indeed, Sainsbury.

This raises one other problem with the notion of cost leadership - indeed with cost-based strategies in general. In itself, low cost gives no competitive advantage. Competitive advantage can only be achieved in terms of a product (or service) which is seen by a user (in the case of a public service also by the provider of resources) to have an advantage over the competition. Competitive advantage is therefore achieved through an organisation's output: its cost base is relevant only in so far as it may provide a means of achieving or enhancing that output in some way.

A general point arising from this discussion is that cost leadership is problematic in relation to the notion of competitive advantage. It may be more useful to think of 'cost-based' strategies, the benefits of which, such as increased margins or surpluses, low prices or efficiency, can be used to achieve competitive advantage.

### **Definition of Differentiation:**

There are also a number of definitional problems with regard to Porter's notion of differentiation. First, he defines differentiation in terms of the ability of a firm to price higher than competitors. His argument is that a product or service which offers something unique, or is of greater value than the competition, should merit a higher price. However, this neglects the possibility that a firm may choose to offer a differentiated product or service at a similar price to competitors in order to increase market share and volume.

If a strategy of differentiation is to be followed then it is important to clarify the following:

- Differentiation from whom: i.e. who are the competitors?
- Differentiation on the basis of what?

### **Market-based Generic Strategies: the 'Strategy Clock':**

Too often managers conceive of generic strategies in terms which are internal to the firm; it has already been argued that cost base - an internal measure - is not in itself a basis of competitive advantage. Similarly, and commonly, a manager may conceive of a strategy of differentiation in technical terms; for example, as a better-engineered product, or a more sophisticated service. While the uniqueness may, indeed, be real in technical terms, it is of no value in achieving competitive advantage unless it is of value to the user, so that the user has a preference for



those products or services over those of competitors. This may seem an obvious point, but it is one which is often overlooked by managers who fail to address the most basic of questions, which is what the market values. Generic strategies need to be thought about in relation to this basic issue.

Assuming that the products or services of different businesses are more or less equally available, customers may choose to purchase from one source rather than another because either (a) the price of the product or service is lower than that of another firm, or (b) the product or service is more highly valued by the customer from one firm than another; here the term perceived added value is used. Though these are very broad generalisations, important implications flow from them.

**Value Added, or Differentiation Strategies:** The next option is, in effect, a broad differentiation strategy: offering perceived added value over competitors at a similar, or somewhat higher, price. The aim is to achieve higher market share, and therefore higher volume, than competitors by offering 'better' products or services at the same price; or enhanced margins by pricing slightly higher. This strategy might be achieved through the following:

- Uniqueness or improvements in products: for example, through investment in R & D or design expertise. This strategy is successfully followed by many Japanese car firms, which have invested heavily in improving the reliability of their products.
- Marketing-based approaches, in effect demonstrating better than the competition how the product or service meets customer needs. Here the strategy is more likely to be built on the power of the brand or on uniquely powerful promotional approaches.

It may be that a business can compete by offering higher value to the customer at a significantly higher price. However, if this strategy is followed, it is likely to mean that the business is competing in a particular market segment - and indeed this may be a real advantage.

However, this strategy raises some important questions and problems:

- The choice may have to be made between broad differentiation across a market or a more focused strategy. Indeed, this may take on global proportions, as managers have to decide between a broad approach in increasingly global markets, or much more selective focus strategies.
- It is important to be clear as to which market segment the firm is competing in, defined in terms of a coherent set of customer values and needs; and this must be translated into action which consistently satisfies those customer values and needs. This may be difficult to do, particularly if the firm is attempting to compete in different market segments, with different needs.

## Ansoff's Model:

### The Ansoff Matrix:

Ansoff (1965) demonstrates the choices of strategic direction open to a firm in the form of a matrix (Figure).

**Figure:** The Ansoff product-market scope matrix (adapted from Ansoff, 1965)



		Products	
		Existing	New
Markets	Existing	<b>Market penetration</b>	<b>Product development</b>
	New	<b>Market development</b>	<b>Diversification</b> <ul style="list-style-type: none"><li>➤ Related</li><li>➤ unrelated</li></ul>

### **Market Penetration Strategy:**

Firm increases its sales in its present line of business. This can be accomplished by:

- price reductions;
- increases in promotional and distribution support;
- acquisition of a rival in the same market;
- modest product refinements.

These strategies involve increasing the firm's investment in a product/market and so are generally only used in markets which are growing, and hence the investment may be recouped. In this respect the strategy is similar to invest to build and holding strategy as described by the Boston Consulting Group.

### **Product Development Strategy:**

This involves extending the product range available to the firm's existing markets. These products may be obtained by:

- investment in the research and development of additional products;
- acquisition of rights to produce someone else's product;
- buying-in the product and 'badging' it;
- joint development with owners of another product who need access to the firm's distribution channels or brands.

The critical factor to the success of this strategy is the profitability of the customer group for which the products are being developed. Also the firm's present competitive advantages in serving the market must confer on to the new good. These can include:

- customer information that allows accurate targeting;
- established distribution channels;



- a brand which can be credibly applied to the new product.

### Market Development Strategies:

Here the firm develops through finding another group of buyers for its products.

Examples include:

- different customer segments - for example, introducing younger people to goods previously purchased mainly by adults;
- industrial buyers for a good that was previously sold only to households;
- new areas or regions of the country;
- foreign markets.

This strategy is more likely to be successful where:

- the firm has a unique product technology it can leverage in the new market;
- it benefits from economies of scale if it increases output;
- the new market is not too different from the one it has experience of;
- the buyers in the market are intrinsically profitable.

### Diversification Strategies:

Here the firm is becoming involved in an entirely new industry, or a different stage in the value chain of its present industry. Ansoff distinguishes several forms of diversification:

#### 1. Related Diversification:

Here there is some relationship, and therefore potential synergy, between the firms exists business and the new product/market space:

- (a) Concentric diversification means that there is a technological similarity between the industries which means that the firm is able to leverage its technical know-how to gain some advantage.
- (b) Vertical integration means that the firm is moving along the value system of its existing industry towards its customers (forward vertical integration) or towards its suppliers (backward vertical integration). The benefits of this are assumed to be:
  - taking over the profit margin presently enjoyed by suppliers or distributors;
  - securing a demand for the product or a supply of key inputs;
  - better synchronisation of the value system;
  - reduction in buyer or supplier power.

However, it also means increasing the firm's investment in the industry and hence its fixed cost base.



## 2. Unrelated Diversification:

This is otherwise termed conglomerate growth because the resulting corporation is a conglomerate, i.e. a collection of businesses without any relationship to one another. The strategic justifications advanced for this strategy are to:

- take advantage of poorly managed companies which can then be turned around and either run at a gain to the shareholders or sold-on at a profit;
- spread the risks of the firm across a wide range of industries;
- escape a mature or declining industry by using the positive cash flows from it to develop into new and more profitable areas of business.

### Portfolio Planning:

Portfolio planning is a term used in describing methods of analysing a product -market portfolio with the following aims.

- To identify the current strengths and weaknesses of an organisation's products in its markets, and the state of growth or decline in each of these markets.
- To identify what strategy is needed to maintain a strong position or improve a weak one.

Several matrices have been developed over the years to analyse market share, market growth and market position.

### Factors influencing Portfolio Strategy:

There are number of factors - historical, personal, strategic, environmental etc. which influence portfolio strategy. Important such factors are given below:

1. **Mission/Vision:** The mission of the company is one of the most important factors which influence, the portfolio strategy because the mission defines the scope and purpose of the company. Formulation of clear vision about the future has let to restricting the portfolio companies like Glaxo.
2. **Value system:** A factor very much complimentary to the mission that influences the portfolio strategy is the value system of the promoters or major stock holders. After the Murugappa group took over the EID Parry, the liquor business of the EID Parry group was sold off as the Murugappa group management felt that it was unethical to be in the liquor business.
3. **Future of Current Business:** The future prospects of the current business are a very important factor influencing the portfolio strategy. If a current business, particularly the most important one, has a bleak future a company would be tempted to divest or diversify into growing business. Having felt that the future of the tobacco business would be very bleak, the ITC diversified into speciality paper, packaging and printing, hotels, agribusiness, financial services and international business etc. and today the non-tobacco businesses contribute a considerable share of the total turnover of ITC. (Some of these



diversifications, however, have not been successful, and the company has, therefore, decided to concentrate more on its core business-tobacco).

4. **Position on the Portfolio Matrix /PLC:** The position of different business on the product portfolio life cycle also may influence the portfolio strategy of a company. Products in the declining stage may be dropped. Similarly some of the dogs or question marks could also be eligible candidates for divestment. Several Indian companies, like the Ceat, have decided to drop businesses which are peripheral or which are not important in terms of business volume or are not otherwise satisfactory in terms of performance and which do not hold out promises for the future of the company. They have adopted the strategy of focusing on the core business (es).
5. **Government Policy:** Government policy sometimes is an important determinant of portfolio strategy. The pre-1991 regulatory regime did not permit many companies, particularly large ones and foreign firms, to pursue the type of growth and diversification strategies they would have followed in an environment of business freedom, resulting in distorted portfolios. The liberalisation has very significantly transformed the environment. The grant of more autonomy to the Navarathnas has provided them with considerable leeway for charting out their future growth.
6. **Competitive Environment:** The competitive environment too has its influence on the portfolio strategy of many companies. When competition is absent or limited, as in a protected market, even firms which are inefficient may be able to thrive. The protection itself may prompt firms to enter such business.

However, as the market becomes competitive, as has been happening in India because of the liberalisation, things may undergo drastic changes. Many firms which survived or flourished in the protected regime would not be able to survive the competition. Further, for various reasons mentioned under the Case for Focusing, it would become necessary to focus on the core business.

7. **Company Resources:** The resources and strengths of the company, undoubtedly, are important factors influencing the 'portfolio strategy'.
8. **Supply/Demand Conditions:** Problems with input supplies may encourage backward integration. Similarly, problems with marketing the output, or advantages of value addition, may encourage forward integration. When products or services can be obtained cheaply/ more efficiently from outside, it may encourage the dropping of such business and dependence on outside sources.
9. **Competitive Moves:** Some firms have a tendency to imitate the growth pattern of the established popular firms. There are firms which follow almost the same portfolio strategies of competitors. Sometimes firm A enters an important business of firm B, the latter may retaliate by entering the business of the former. There are also cases of firms refraining from certain business for fear of such retaliations.
10. **Portfolio Strategy of Parent:** The portfolio strategy of subsidiaries may be influenced by the portfolio strategy of the parent as has been the case with companies like Glaxo India, ICI and Hindustan Lever.



- 11. Business Environment:** The business environment, in general, is an influencer of the portfolio strategy and, quite obviously, significant changes in business environment have important implications for portfolio strategy.

## Models:

A model is an abstraction of a real system, which permits the behaviour of the system to be explored under various different circumstances. A model can be expressed in a number of ways for example in a set of mathematical relationships or in pictorial or graphical form. There are many different types of model.

Descriptive models, as their name suggests, are intended to describe what will happen given a certain set of assumptions, and how the outcome might differ if any of these assumptions were changed. Often referred to as 'What if?' models, they seek to show the impact of changes such as increases in raw material prices, increases in sales volume or decreases in sales price. Most descriptive models are financial.

Strategic planning models are sometimes referred to as business planning models. The approach to strategic planning is for an organisation to decide on its objectives, generate strategic options and choose a strategy for implementation.

Heuristic models are models that do not provide an optimal solution, but which help the planner to work towards a satisfactory set of planning decisions by testing out (with the model) a large number of alternatives and options. Because a large number of alternatives are evaluated, computers are essential for heuristic modelling. Many business plan models are heuristic in character, because they can be used to test out a large number of possible choices, and work towards an overall strategic plan that appears to be more satisfactory than anything else that can be devised.

Scenario building is used in strategic planning. It can be described as the process of identifying alternative futures, i.e. constructing a number of distinct possible futures permitting deductions to be made about future developments of markets, products and technology. Such models include simple surprise-free extrapolations, creative thinking such as brain storming, systems models such as the MIT World Model, and the Delphi model.

An example of an optimisation model is the economic order quantity model, which seeks to minimise costs of stockholding by identifying the least-cost size of order for raw material and component supplies, or for production quantities in batch production system.

A deterministic model is a model in which the values of each 'input variable' are known with certainty, and the way in which the variables inter-react is also certain and predictable.

A stochastic model is one that recognises that some variables might have any value from a certain range of 'outcomes', although a probability distribution for such outcomes can be estimated and used in the model.

Some experiments have been carried out to develop behavioural models for marketing which attempt to analyse and predict customer or buyer behaviour.

They achieve this by recognising what factors influence a buyer's purchasing decision, and



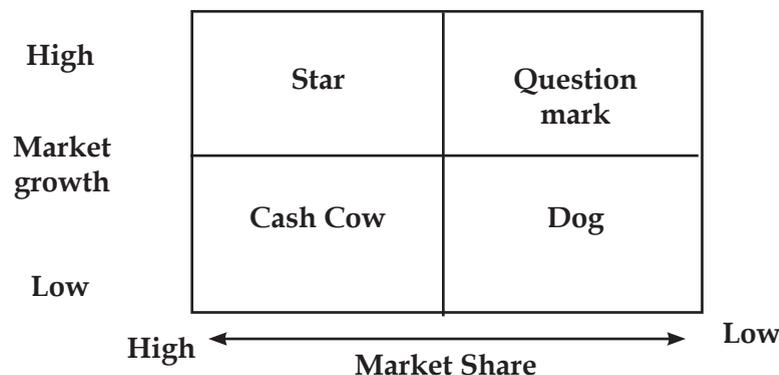
assigning a points 'score' or weighting to each factor within the behavioural model. They then assess how well the organisation's products and marketing mix can tap the buyer's purchasing motives. The model can then be used to experiment with the marketing mix to decide what mix is most likely to be successful in creating sales.

The Boston matrix combines elements of a number of these models and could be used as an input to a descriptive model.

## BCG Matrix and Other Models:

### Boston Matrix:

The Boston Consulting Group (BCG)'s matrix analyses 'products and businesses by market share and market growth.'



This growth/share matrix for the classification of products into cash cows, dogs, rising stars and question marks is known as the Boston classification for product-market strategy.

- (i) Stars are products with a high share of a high growth market. In the short term, these require capital expenditure, in excess of the cash they generate, in order to maintain their market position, but promise high returns in the future.
- (ii) In due course, however, stars will become cash cows, with a high share of a low-growth market. Cash cows need very little capital expenditure and generate high levels of cash income. The important strategic feature of cash cows is that they are already generating high cash returns, which can be used to finance the stars.
- (iii) Question marks are products in a high-growth market, but where they have a low market share. A decision needs to be taken about whether the products justify considerable capital expenditure in the hope of increasing their market share, or whether they should be allowed to 'die' quietly as they are squeezed out of the expanding market by rival products. Because considerable expenditure would be needed to turn a question mark into a star by building up market share, question marks will usually be poor cash generators and show a negative cash flow.
- (iv) Dogs are products with a low share of a low growth market. They may be ex-cash cows that have now fallen on hard times. Dogs should be allowed to die, or should be killed



off. Although they will show only a modest net cash outflow, or even a modest net cash inflow, they are 'cash traps' which tie up funds and provide a poor return, on investment, and not enough to achieve the organisation's target rate of return.

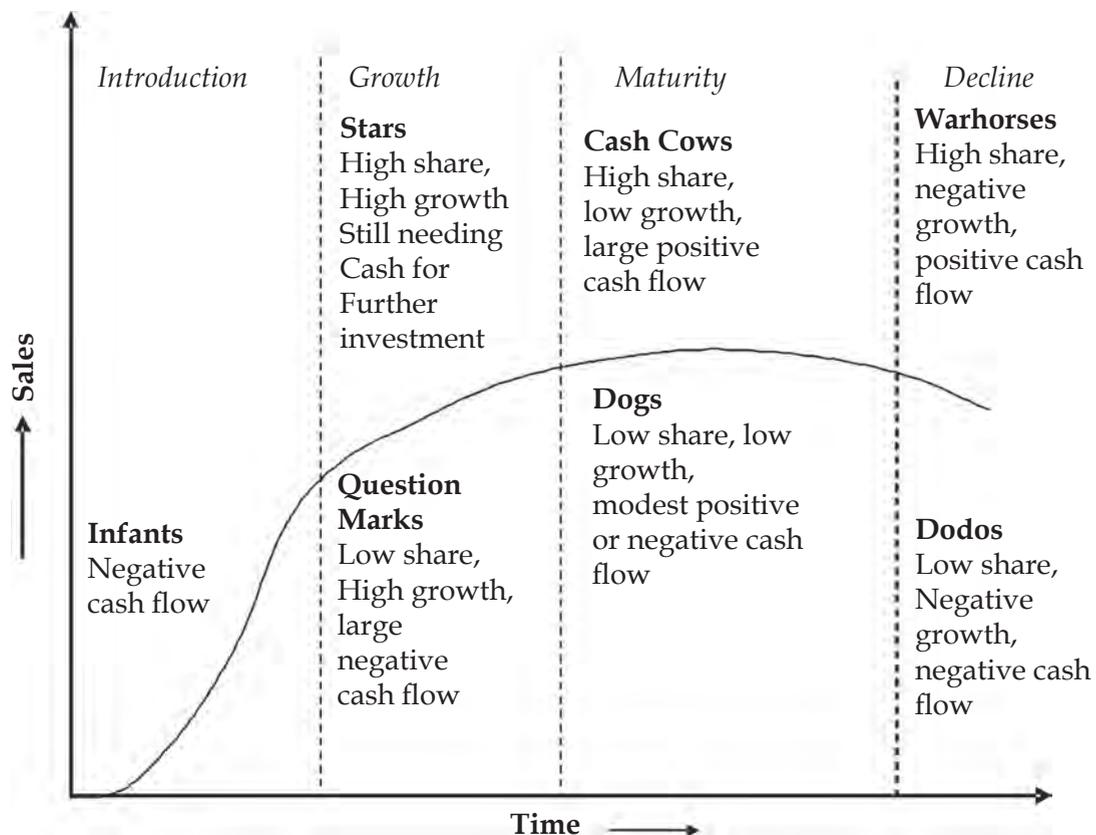
There are also infants (i.e. products in an early stage of development) and warhorses (i.e. products that have been cash cows in the past, and are still making good sales and earning good profits even now). The car industry provides interesting examples to fit the BCG matrix. Ford, with the Fiesta, Escort and to a lesser extent, the Sierra has had a range of stars, which cost a substantial amount to develop and launch, but which soon became cash cows. Vauxhall invested heavily in the Cavalier, with great success, and here we see an example of a question mark turning into a star and then a cash cow, and the Cavalier has been at the forefront of Vauxhall's return to marketing success.

### **Limitations of the BCG Model:**

The BCG model analyses products in the light of two variables: the growth in the market as a whole, and the growth of the product's share of the market in relation to other products. It suggests that there is a relationship between these variables and the product's propensity to generate cash or consume it. It rests on the assumption that the firm with the highest market share can be the lowest cost producer. The model suggests that cash cows should be used to fund stars. There are a number of limitations to the model (and remember that it is only a model, and any model necessarily simplifies the real world which it tries to depict).

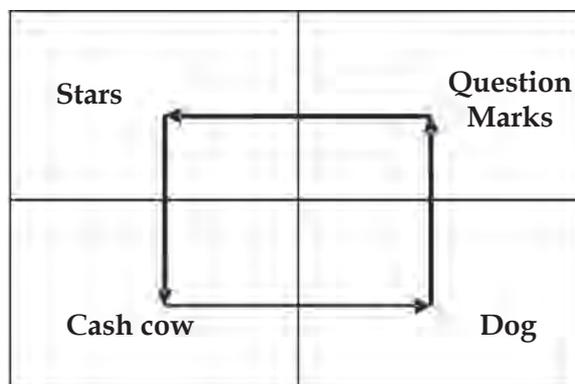
- (i) How do you define your market? Segmentation strategies can provide a niche. A niche is inevitably a low or restricted share of the market, yet it is the heart of a focus strategy. Firms can profit servicing small low-growth niches.
- (ii) Market growth and market share are assumed to be reliable pointers for cash flow. This is often not true. High market share does not necessarily mean high profits, especially if a firm has high costs, or has bought market share by low pricing.
- (iii) Relative market share amongst competitors is not necessarily an indication of their competitive strengths at any particular time. After all, market leaders are vulnerable.
- (iv) The BCG model might become a self-fulfilling prophecy: Dogs which could be made profitable might simply be left to the rather than be resuscitated.
- (v) It does not suggest any response to declining markets other than withdrawal: many firms can make money in 'sunset industries'.
- (vi) It ignores the extent to which a firm which serves a number of markets can exploit production synergies.
- (vii) It ignores the threat of substitute products.

The product life cycle concept can be added to a market share/market growth classification of products, as in Fig. below:



**Fig.: Product Life Cycle with market share/market growth classification**

These matrices straightaway focus attention on the strategies most logical for investments in the four quadrants. Thus for stars, the logical strategy both from a long-term perspective as also for immediate business reasons, should be preferably to increase market share or at least to hold on to existing market share. For cash cows, in view of market growth, any attempt to increase market share, particularly, if it requires very substantial investment and cash outgo, is hardly a logical strategy. Over the years, these investments do not have very substantial growth prospects. The logical strategy, is therefore, to hold on to the market share and harvest as much cash as possible in the form of retained profit. For dogs, four strategies are feasible: invest to increase the market share and get into the question mark category; harvest; divest; invest to get into the cash cow category. For a question mark, two possible strategies exist: elevate itself into the star category; disinvest. It will thus be seen that the logical progression of an investment should be anticlockwise, as shown in next Fig. Any progression in the opposite direction would be indicative of bad strategic management.

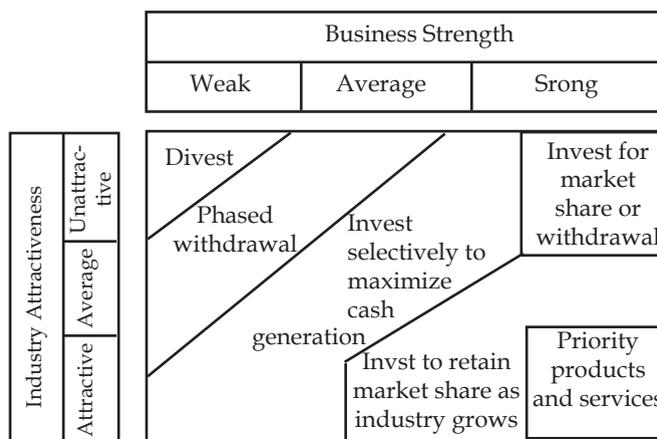


**Fig.: Logical Progression of Investment**

In order to dominate a market, a company must normally gain that dominance when the market is in the growth stage of the product life cycle. In a state of maturity, a market is likely to be stable with customer loyalties fairly fixed. It is therefore, more difficult to gain share. But if all companies in the growth stage attempt to gain market share, competition will be very fierce, therefore only those companies prepared to invest in order to gain share will achieve dominance. This may well suggest that a company following the principles suggested by the BCG will need to price low and spend high amounts on advertising and selling in order to dominate such a strategy is one of high risk unless such low margin activity is financed by higher profit earning products. This leads to the idea of a product wise balanced BCG model for the growth share matrix as a tool for product portfolio analysis.

The matrix combines market growth rate and market share and thus directly related to the experience curve. Thus for a star, the high volume is likely to yield the benefits of the experience curve and a reduction in cost. This benefit would not be available in case of question mark. In the case of cash cow again, the high volume would lead to the benefits of the experience curve yielding higher potential profit. Dogs are the worst of all combinations. They are often a cash drain and use up a disproportionate share of management time and resources. The implications for the analysis and evaluation of strategy are thus easy to see.

**Directional Policy Matrix/The Nine-Cell G.E. Matrix:**





General Electric of U.S.A., assisted by McKinsey, developed a nine-cell strategic planning grid which attempted to correct some of the limitations of the BCG matrix approach. This grid is illustrated in above Fig. as the Directional Policy Matrix. Each dimension is a composite measure of several component factors. Industry attractiveness is a function of a number of factors. The procedure involves assigning each of the factors a weight depending on its perceived importance, followed by assessing how each business compared on each factor using a 1 to 10 rating scale, and then computing a weighted composite rating. The choice of the factors and the weights assigned to the factors vary from business unit to business unit. The same approach is used to measure Business Strength where aspects relevant to competitive position are considered. Each of the dimensions is classified into three categories: high (strong); medium; low (weak); thus, creating nine cells. The Tables (nos. 1 and 2) below have given a hypothetical illustration of rating of industry attractiveness and business strength. Each factor is assigned a weight. Rating of 1 to 4 considered as low; 4 to 7 as medium and 7 to 10 as high. In the hypothetical case illustrated in Table nos. 1 and 2, the total score of industry attractiveness is 6.75 and for business strength are 7.55 out of the maximum possible score of 10 for each. In other words, the industry attractiveness is medium and the business strength is high.

**Table 1: Industry Attractiveness**

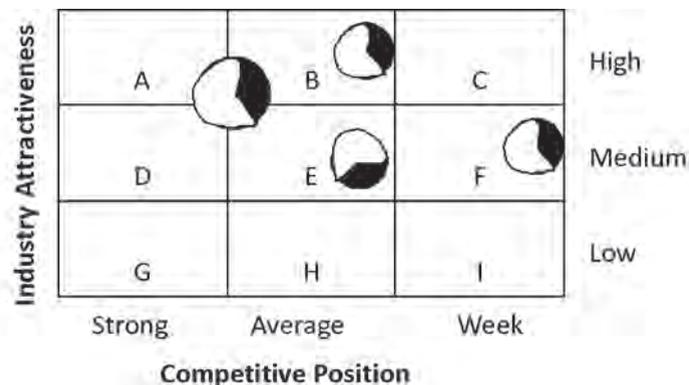
Factors	Weight	Rating (1 to 10)	Value
Availability of inputs	0.20	7	1.40
Overall market size	0.15	8	1.20
Annual growth rate of market	0.15	6	0.90
Profitability	0.15	7	1.05
Competitive intensity	0.15	6	0.90
Technological requirements	0.10	7	0.70
Capacity utilisation	0.10	6	0.60
Total	1.00		6.75

**Table 2: Business Strength**

Factors	Weight	Rating (1 to 10)	Value
Market share	0.15	5	0.75
Market share growth rate	0.20	7	1.40
Brand image	0.05	8	0.40
After sales service	0.05	7	0.35
Pricing	0.10	7	0.70
Distribution capacity	0.10	9	0.90
Capacity utilisation	0.10	9	0.90
Product quality	0.10	8	0.80
Technology	0.15	9	1.35
Total	1.00		7.55

The choice of the factors determining the industry attractiveness and business strength and the determination of weights are very critical in the analysis. Therefore, they often involve a lot of research. Companies will be successful to the extent that they go into attractive markets and possess the required business strength to succeed in those markets. If one or the other is missing, the business will not produce outstanding results. Neither a strong company operating in an unattractive market nor a weak company operating in an attractive market will do very well.

All the businesses of the company (hypothetical case stated above) are shown in a Nine-cell GE Matrix.



**Fig. Nine-cell GE Matrix**

The size of the circles represents the size of the relevant markets. The company's market share in each of the business is represented by the shaded area. The position of the business in the matrix would suggest the appropriate strategy for the business. There are three possible strategies. Along the lower left to the upper right diagonal (cells G,E,C) representing SBUs which are medium in overall attractiveness. Selective investment may be appropriate. These are holding type strategy and would not, therefore, rank as a priority in resource terms. The three cells below the diagonal (H,I,F) represent SBUs that are low in overall attractiveness. The appropriate strategy for them would be harvesting or divesting. It will be seen that the overall attractiveness of products/services diminishes as one move diagonally from the top left hand corner to the bottom right hand corner. Priority products in the top left hand corner are those which score highly on both axes. As a result they should receive priority for development and the resources necessary for this should be allocated to them. Products/services bordering on the priority box should receive the appropriate level of investment to ensure that, at least, the very market share is retained as the industry grows.

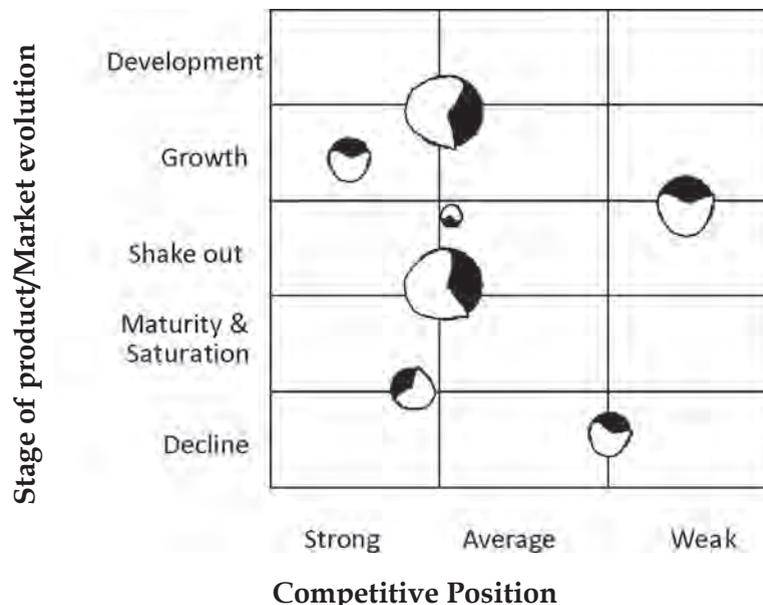
Products/services with a weak competitive position in an attractive industry are placed at top right hand corner of the matrix. They should be evaluated in respect of the potential to establish and sustain real competitive advantage. If the prospect seems good, the carefully targeted investment should be considered seriously. A method of targeting would be to select among the factors contributing to the total weighed score of the competitive position. Those who's weighed scores are most significant, would receive priority. Products across the middle diagonal should receive cordial treatment. A good proportion of products are likely to fall in this category, indicating attempt to maximise cash generation with limited commitment



of additional resource. Currently profitable products with little future potential should be withdrawn gradually but retained as long as they are profitable and the resources committed to them cannot be allocated more effectively elsewhere. This model is an improvement over the BCG matrix in the sense that while BCG matrix bases industry attractiveness on a single variable (industry growth rate), in this model industry attractiveness is measured by a number of factors. Similarly, while the BCG matrix bases business growth entirely on relative market share, in this model, the business strength is rated by considering a number of factors. Also, the Nine cell model is a refinement of the four-cell BCG matrix (only high and low), which is too simplistic and in which the link between market share and profitability is not necessarily strong. Low share business can be profitable and vice versa.

**The Product/Market Evolution Matrix (Hofer Matrix):**

In order to identify the developing winner, Hofer and Schendel suggest a fifteen-cell matrix in which businesses are plotted in terms of their competitive position and their stage of product/market evolution. Such a matrix is depicted in Fig.



**Fig.: Product/Market Evolution Matrix**

As with GE matrix, circles represent the sizes of the industries involved, and the pie-wedges represent the market share of the business involved. Future positions can be plotted and used to identify the major strategic issues.

**SPACE (Strategic Position and Action Evaluation):**

A.J.Rowe and others have developed a model based on four important variables:

- the relative stability/turbulence of the environment;
- industry attractiveness;
- the extent of any competitive advantage;
- the company’s financial strengths.



Scores are awarded to each factor and then diagrammed.

Arthur D. Little (ADL) presents a twenty-cell matrix identified by the competitive position of a business and its industry maturity. Competitive position is approximated by market share, share movement, technology, breadth of the product line, and special market advantages, and industry maturity is measured by considering industry growth, rate of technological change, stability of shares, and customer switching. Again, weights must be defined to calculate the matrix position of a particular business. The matrix location of each unit can then be used to formulate a natural strategy to accomplish the business goals of the firm. This model is shown in the Figure below.

In it, market situation is described in four stages - from embryonic to ageing. The competitive situation is shown in five categories ranging from weak to dominant. The purpose of the matrix is to establish the appropriateness of a particular strategy in relation to these two dimensions. The position within the life cycle and the company is determined in relation to eight external factors or disciplines of the evolutionary stage of the industry. These are: market growth rate; growth potential; breadth of product line; number of competitors; spread of market share among the competitors; customer loyalty; entry barriers; and technology. It is the balance of these factors which determine the life cycle. The competitive position of the organisation within its industry can be established by looking at the characteristics of each category. Thus a dominant position usually results from quasi-monopoly. Strong organisations are those that can follow strategies of their own choice without too much concern for the competitors etc.

Within the general framework, however, strategies suggested by the various models may be quite different. There are three reasons for it:

- The portfolio position of a unit in the relevant matrix can differ due to different characteristics used in the classification schemes of the models.
- The GE and ADL models, having more potential classification than the BCG model, may generate more potential strategies for a business unit than the latter.
- The models differ with regard to their treatment of risk. The McKinsey and ADL models both seek to incorporate some concept of risk in the matrix position of the unit. The BCG model downplays risk. Moreover, there are a number of theoretical problems associated with portfolio models. Some of the important ones are:
  - The assumption of independent business units ignores significant theoretical problems with the diversibility of the firm into business units.
  - The assumption for the cost of capital appears to represent capital rationing and fails to consider risk.
  - The assumption of dominance tends to give excessive consideration to the relative competitive position of a business and minimises the influence of other characteristics that affect profitability.
  - The assumption of industry attractiveness ignores special investment opportunities and downplays the importance of competitor's strategies.



	Embryonic	Growth	Mature	Ageing
Dominant	Fast growth, Start up	Fast growth Attain cost leadership, Renew, defend position	Defend position, Attain cost leadership, Renew, Fast growth	Defend position, Focus, Renew, Growth with industry
Strong competitive position	Start up, Differentiate fast growth.	Fast growth, Renew, Focus, differentiate	Attain cost leadership, Renew, Focus, Differentiate growth with Industry	Find niche hold niche-hang on, Growth with industry, Harvest
Favourable	Start up. Differentiate Focus, fast growth.	Differentiate Focus, Catch up, Growth with Industry,	Harvest, Hang on Find Niche, Hold Niche, Renew turn around, Differentiate Focus, grow with Industry	Retrench, Turn around.
Tenable	Start up. Grow with Industry. Focus.	Harvest, Catch up. Hold niche, Hang on, Find niche, Turnaround, Focus, Grow with industry.	Harvest. Turn around, Find niche, Retrench	Divest Retrench
Weak	Find niche, catch up. Grow with industry.	Turnaround, Retrench	Withdraw, Divest	Withdraw

Stages of Industry Maturity

Fig. ADL Matrix

The lines across the figure indicate the growth history of different products of the company during life cycle.



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# STUDY NOTE - 4

## Marketing Strategy

### PART-A

#### Major Contents of Part A:

- Market and Marketing ;Marketing Management
- The importance of developing a market orientation in Strategic Planning
- Marketing Strategies, Profit Impact on Marketing Strategies
- Marketing Mix
- Market Segmentation
- Branding

#### **Market:**

Market is an arrangement that provides an opportunity of exchange of goods and services, for money or money's worth. It is the means to settle the terms of exchange.

#### **Marketing:**

Some important definitions of marketing are:

"Marketing is the performance of business activities that direct the flow of goods and services from producer to consumer or user."

Another definition of marketing "is getting the right goods and services to the right people at the right place, at the right time, at the right price, with right communication and promotion."

Marketing is "a social process by which individuals and groups obtain what they need and what through creating and exchanging products and value with others."

Marketing is, "the management function which organises and directs all those business activities involved in assessing and converting customer purchasing power into effective demand for a specific product or service and in moving the product or service to the final consumer or user so as to achieve the profit target or other objectives set by company.

Marketing is the process of exchange involving two distinct aspects namely, mental and physical. In a macro sense, it is a system that directs an economy's flow of goods and services to consumers and accomplished society's objectives. In a micro sense, it is the process of finding out what people need; helping to develop need satisfiers, informing and persuading, moving properly priced products and services to consumers and keeping the consumers satisfied.



## Role of Marketing:

The first and foremost role is that it stimulates potential aggregate demand and thus enlarges the size of the market. You might ask how it helps in the economic growth of a country. The answer is that through stimulation of demand people are motivated to work harder and earn additional money to buy the various ideas, goods and services being marketed. An additional advantage which accrues in the above context is that it accelerates the process. (In India, it is believed that about one-fourth of GNP and more than one-third of agricultural output are still non-monetised).

Another important role which marketing plays is that it helps in the discovery of entrepreneurial talent. Peter Drucker, a celebrated writer in the field of management, makes this point very succinctly when he observes that marketing is a multiplier of managers and entrepreneurs.

Still another important contribution which marketing makes is that it helps in sustaining and improving the existing levels of employment.

## Marketing Functions:

**Marketing involves eight important functions:** Buying, Selling, Storage, Transportation, Financing, Standardisation, Grading and Risk-Taking.

## Marketing Environment:

It is the sum-total of external factors within which the enterprise operates. It is the compendium of forces external in nature like social, economic, ethical, political, physical and technological. These are uncontrollable external forces that provide opportunities and challenges to the firm.

## Universal Functions of Marketing:

Universal functions of marketing consist of buying, selling, transporting, storing, standardisation and grading, financing, risk-taking and market information.

## Marketing Objectives:

- Creating awareness and appreciation of the crucial role of consumer in shaping decisions, and of the profit as a basic foundation of corporate existence, stability and growth.
- Awareness that consumers can only be helped to solve their problems through corporate efforts.
- Awareness and concern with trans-departmental implications of an individual department's decisions and actions and their effect on the firm's equilibrium with its external environment – consumers, competitors, government, etc.
- Concern with, and interest in, the innovation of products and services so as to solve select consumer problems.
- Concern with the effect of new product and service introduction on firm's present and potential profit position.



- Sensing and monitoring information as regards market potential to serve as a base for goal and target setting.
- Focus in coordinating company effort and in establishing corporate and departmental objectives consistent with the enhancement of the firm's profit position.
- Awareness and appreciation of the role of formal, periodic, short and long-range planning of company's goals, strategies and tactics resulting in an integrated system of marketing actions.
- Desire and preparedness for the creation, expansion, contraction, termination, or in any way, restructuring of any corporate function in order to mobilize, utilize and control corporate effort.

### **Marketing Plan:**

Marketing plan is a written document that specifies in detail the firms marketing objectives and how marketing management will use the controllable marketing tools such as product design, channels, promotion and pricing to achieve these objectives.

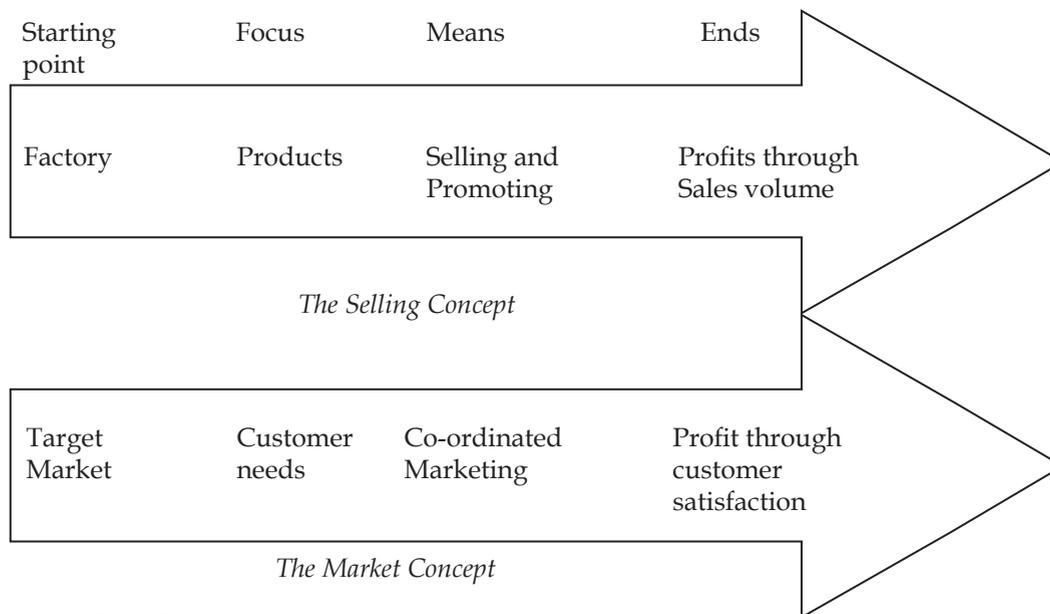
Marketing strategy means finding attractive opportunities and developing profitable ways to capture the market. A marketing strategy specifies a target market and a related marketing mix. It is a big picture of what a firm will do in some market. The job of planning strategies to guide a whole company is called strategic planning. It is the managerial process of developing and maintaining a match between an organisation's resources and its market opportunities.

### **The Marketing Concept and the Selling Concept:**

The marketing concept is a business philosophy that challenges previous concepts. The marketing concept holds that the key to achieve organisational goals consists in determining the needs and wants of target markets and delivering the desired satisfactions more effectively and efficiently than competitors. The marketing concept has been expressed in many colourful ways:

- meeting needs profitably
- find wants and fill them
- love the customer, not the product
- have it your way
- you're the boss
- to do all in our power to pack the customer's rupee full of value, quality and satisfaction.

The marketing concept rests on four main pillars, namely target market, customer needs, coordinated marketing and profitability. These are shown in the figure below, where they are constructed with a selling orientation. The selling concept takes an inside-out perspective.



**Fig.: The selling and marketing concepts contrasted**

It starts with the factory, focuses on the company’s existing products, and calls for heavy selling and promoting to produce profitable sales. The marketing concept takes an outside-in perspective. It starts with a well-defined market, focuses on customer needs, co-ordinates all the activities that will affect customers and produces profit through customer satisfaction.

Most companies do not really grasp or embrace the marketing concept until driven to it by circumstances. Any of the following developments might produce them:

- sales decline
- slow growth
- changing buying patterns
- increasing competition
- increasing marketing expenditure.

In the course of converting to a market oriented company, a company will face three hurdles-organised resistance, slow learning and fast forgetting. But, since the marketing concept is concerned with how the business conduct itself, the application of the marketing concept to management decisions should begin at the strategic planning stage, and continue through product development and testing to its eventual sale in the market, and after sales services, in other words, throughout the value chain.

**Societal Marketing:**

Societal marketing concept calls for a customer orientation backed by integrated marketing aimed at generating customer satisfaction and long-run consumer welfare as the key to attaining long-run profitable volume.



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## The importance of developing a market orientation in Strategic Planning:

The marketing concept is the most practical philosophy for achieving any commercial organisation's objective such as growth in profits.

- By applying the marketing concept to product design etc. the company might hope to make more attractive products, hence to achieve sustained sales growth and so make higher profits.
- The importance, to some firms, of building up a long-term relationship with customers. Profits do not only come from individual transactions with customers, but also from the customer's propensity to deal with the firm rather than its competitors.

The importance of developing a market orientation to strategic planning is implicit in the marketing concept.

- With the product concept and selling concept, an organisation produces a good or service, and then expects to sell it. The nature of the organisation's business is determined by what it has chosen to produce, and there will be a reluctance to change over to producing something different.
- With the marketing concept, an organisation commits itself to supplying what customers need. As those needs change, so too must the goods or services which are produced. In other words, marketing orientation enables a firm to adapt to the environment.

Strategic planning involves making decisions about the choice of product-market strategies—developing new products and new markets that will fill the profit gap. A marketing orientation should help planners to identify more successfully what products or markets, by meeting perceived customer needs, would earn good profits for the organisation. Having decided on a competitive strategy and a product-market strategy portfolio and a sales growth plan, a firm must then decide on the following:

- Which markets offer the opportunity for successful investment? In other words, if the strategy is diversification, which new markets should be looked at?
- From these, which target markets should be selected for development.
- How the firm should offer its product or service in comparison with the offerings of competitors.
- How to establish a marketing system and organisation for the firm.
- How to develop a marketing plan and then implement and control it.

Strategic marketing is concerned with the development and implementation of marketing plans, for both the long term and short term, which should enable a firm to achieve its objectives and goals. A firm can apply this as follows:

- Environmental opportunities exist anywhere in the environment, e.g. in the field of what type of goods and services. Not all environmental opportunities are appropriate to the objectives of a single firm.
- Any company is likely to have distinctive competence in one or more areas of activity which makes it more likely than other companies to be able to take advantage of a certain environmental opportunity.



## Marketing Management:

Marketing management is the crucial and creative task of delivering consumer satisfaction and thereby earning, profits through consumer demand.

## Marketing Strategies:

Marketing strategy is a process that can allow an organisation to concentrate its limited resources on the greatest opportunities to increase sales and achieve a sustainable competitive advantage. A marketing strategy should be centered around the key concept that customer satisfaction is the main goal.

Markets can be described and defined by their nature of competition. Basically, the company's overall marketing strategy is its competitive posture in the marketplace. The marketer's first task is to select a promising market and identify its needs and buying patterns, after which he formulates strategies for each controllable factor (product, distribution, promotion and pricing).

Management's mission is to manipulate the controllable in terms of the uncontrollable in ways that both meet the target market needs and facilitate achievement of the company's overall goals. To accomplish this, management unifies the product market, distribution, promotion and pricing strategies into an overall marketing strategy (i.e., into a deliberately planned competitive posture).

In marketing, many decisions are made – each seemingly independent, all, in fact, interrelated. Thus, if a marketer changes the product's price by a substantial amount, other parts of the company's overall marketing strategy need re-evaluation. Ultimately, marketing success depends on skill in maintaining an optimum combination of strategies, which is in keeping overall marketing strategy in balance.

In formulating and implementing overall marketing strategy, management concerns itself with identifying opportunities to serve target markets profitably and serving them so effectively that it is difficult for competitors to take business away on a profitable basis.

Competitive postures are either aggressive or defensive. When a market's products are already established in the market, there is a strong temptation to adopt a defensive posture, i.e., to maintain a holding action. The danger in defending the status-quo is that this means yielding the initiative to competitors. If the competitors develop important product innovations, they may succeed in breaking established customer loyalty and buying patterns.

The importance of formalized overall marketing strategies (i.e., deliberately planned competitive postures) varies with the competitive setting. There are four types of competitive settings.

1. No direct competition
2. Pure competition
3. Monopolistic competition
4. Oligopolistic competition



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## Formulating Overall Marketing Strategy:

A marketing strategy should be used as a working paper that guides the store's operations for the next 1-2 years. The format of a marketing strategy has three sections:

Basic assumptions -- based on survey results and past planning processes;

Strategic goals -- goals for growth and fiscal health of the co.

Achieving goals -- operational ideas for changes that will alter the perception of the storefront by the public to conform to the strategic goals.

Formulation of overall marketing strategy requires integration of all dimensions of marketing effort. Ideally, the marketer should have some concrete system for determining whether the combination of inputs going into the overall marketing strategy is optimal, and therefore, whether the resulting profit (and other desired outputs, in terms of the company's goals) is also optimal. The systematic approach is one requiring evaluation of possible inputs in overall marketing strategy in terms of the likely outputs. Selections are then made from the various inputs so that the combination (i.e., the overall marketing strategy) has the best chance for achieving the desired outputs.

In order to be consistently and profitably customer oriented in a continuously changing market, what is needed is a proper marketing strategy concerning target markets, marketing mix and marketing expenditure levels. Thus, a viable fit is achieved among corporate objectives, available resources, skills and opportunities.

The strategic planning process is carried out at corporate, business and product levels. Strategic planning involves repeated cycles of analysis, planning, implementation and control. The horizons of strategic plans are usually larger – usually 1-5 years. Corporate strategic planning involves four planning activities:

- (a) Developing a clear mission for the company in terms of its industry, product & competence.
- (b) Identifying the company's Strategic Business Units (SBUs) which can benefit from separate planning and be managed as separate profit centres.
- (c) Allocating resources to SBUs based on their market attractiveness and business strength, or market growth rate and Relative Market Share matrix. The two most important portfolio models are Boston Consulting Group (BCG) model and General Electric (GE) model. Careful use of the portfolio models helps in isolating SBUs to be built, maintained, harvested or divested.
- (d) Expanding present business and developing new ones to fill the strategic planning gap: The company can identify opportunities by considering intensive growth (market penetration, market development and product development), integrative growth (backward, forward and horizontal integration) and diversification (concentric, horizontal and conglomerate diversification).

SBUs determine their own business, product and services strategies considering the business mission, external and internal environment. Marketing strategy provides the context for marketing planning with a much smaller horizon, usually up to 1 year.



## Marketing Mix:

Marketing mix is the pack of four sets of variables namely, product variables, price variables, promotion variables and place variable. It is the blend of all the marketing efforts covering the four elements of product-price-promotion and place.

### Framework and Management of Marketing Mix.

Ideally, the ingredients of a good marketing mix flow logically from all the relevant dimensions of a target market. Table on the next page shows the kinds of market dimensions you might like to know-and their effect on the strategic decision areas. Usually, however, you don't or can't know all that you would like to about a potential target markets. But you may know enough to decide whether the product is a consumer product or an industrial product - and which product class is most relevant.

A first step, then, is to decide the proper product class-because it suggests how a "typical" product would be distributed and promoted. So, if you don't know as much as you would like about the potential customers' need and attitudes, at least knowing how they would classify the company's product can given you a head start on developing a marketing mix. Further, it's reassuring to see that product classes do summarise some of what you would like to know about target markets - as seen in the Table.

#### "Typical- is not necessarily "right":

The typical marketing mix for a given product class is not necessarily right for all situations. Some very profitable marketing mixes depart form the typical to satisfy some target markets better.

A marketing manager may have to develop a mix that is not typical because of various market realities - including special characteristics of the product or target market, the competitive environment, and his own firm's capabilities and limitations. It is useful to see how some of these market realities may affect marketing mix decisions.

**Table: Relation of Potential Target Market Dimensions (including ones that are related to product classes) to Marketing Mix Decision Areas**

Potential target market dimensions	Effects on decision areas
1. Geographic location and other demographic characteristics of potential customers	Affects size of Target Markets (economic potential) and Place (where products should be made available) and Promotion (where and to whom to advertise).
2. Behavioural needs, attitudes, and how present and potential products or services fit into customers' consumption patterns.	Affects Product (design, packaging, length or width of product line) and Promotion (what potential customers need and want to know about the product offering and what appeals should be used)
3. Urgency to get need satisfied and desire and willingness to compare and shop	Affects Place (how directly products are distributed from producer to consumer, how extensively they are made available, and the level of service needed) and Price (how much potential customers are willing to pay)



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### **Size and Geographic Concentration:**

If the sales potential of the target market is large enough, it may be possible to go directly to retailers, consumers, or users. This is especially true if the target customers are highly concentrated-like the customers for many industrial products. For final consumer products, however, customers are usually numerous and widely scattered - and they buy in small quantities. Although the total market may be relatively large, it's often split up into small geographic segments - with too little demand in each market to support a direct approach.

### **Value of Item and Frequency and Regularity of Purchase:**

Even low-priced items such as newspapers may be handled directly if they are purchased often and tie total volume is large. But for products purchased infrequently - even though purchases are large -specialists such as commission merchants, agents, brokers, and other middlemen are useful. A critical factor is the cost - in relation to actual sales - of regularly providing the needed marketing functions.

### **Customer preferences for Personal Contact:**

Customer preferences vary even within the same product class. Some target customers - especially some industrial customers - don't like to buy from middlemen. Even though they may want only small quantities, they prefer to buy directly from manufacturers. The manufacturers may tolerate it because these customers sometimes buy larger quantities.

Other buyers, however, prefer the convenience of buying through a middleman - because they can telephone orders and get immediate action from a local source. Two very different marketing mixes may be needed to fully satisfy both types of customers.

Some products - because of their technical nature, perishability, or bulkiness - require more direct distribution than their product class implies.

### **Technical Products:**

Complicated products - such as conveyor systems and electronic data processing equipment-call for much technical selling, expert installation, and servicing. Wholesalers often are not interested in or able to provide all these required services.

The marketing department is to decide the allocation of the marketing budget of a product to different marketing elements depending on the market condition. McCarthy, in his conceptual model, has reduced the variables, to four Ps.

When the marketing functions are assigned relative/ importance in terms of allocation of business resources in the context of a given market situation and are interlocked in a planned and systematic manner to attain a given objective, they merge their identity in what is called the 'marketing mix and become its components' or what Borden has called 'ingredients'. The marketing executive then assumes the role of a mixer of ingredients. However, an optimal marketing mix evolves from a creative blending of ingredients, or elements, so that the product or service is offered to the market under the conditions most favourable to the attainment of marketing objectives.

The entire managerial effort is aimed at attaining the marketing objective of satisfying the



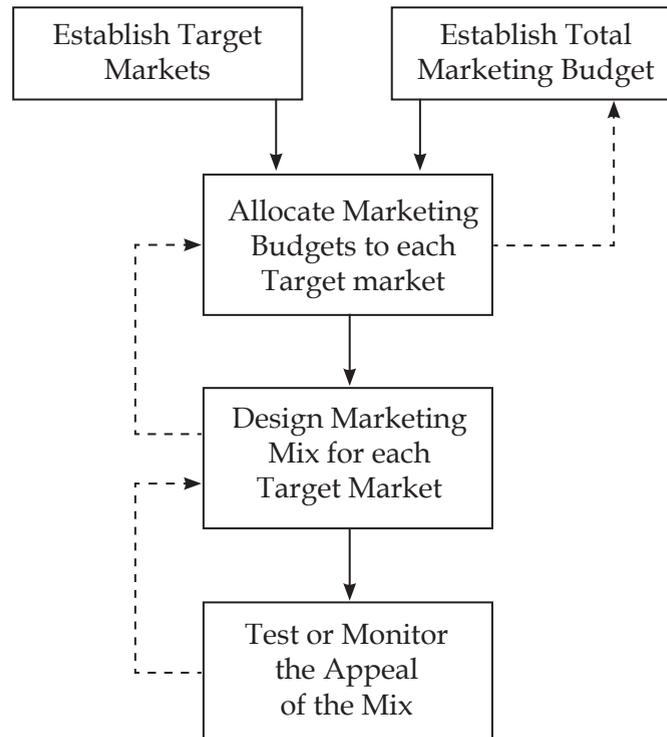
needs of customers, business and society. It means that a consumer must get value satisfaction out of the products/services delivered to him by company, and which in the process, must earn profits sufficient to ensure survival, growth and stability. Nevertheless, both these aims will have to be reconciled to match the social needs. This calls for a great deal on the part of the marketing executives, as they have to balance these needs without endangering any of them. In brief, the aim is to implement the marketing concept with social overtones.

The aim of marketing is, generally speaking, to maximise profits. There is a wide variety of possible combinations of marketing methods which management can select, and some combinations will earn a greater profit than others. This combination of factors is the marketing mix. A marketing mix should be developed which will appeal to target customers. Kotler defines the marketing mix as follows. 'Marketing mix is the set of controllable variables and their levels that the firm uses to influence the target market.' McCarthy's definition of marketing mix as the 4 Ps of product, place, price and promotion has already been described earlier in this text, and you will often find it convenient to consider marketing mix under these four headings.

- (a) **Product.** The success of a new product will be improved if the product has certain distinguishing characteristics and features.
- (i) If it is an innovative product, it must appeal to certain consumer needs in a way that no other product can do as well.
  - (ii) If there are rival products, it should have features which give it some edge, such as a better quality/price mix, incorporate new technology features or be 'environmentally' safe etc. In the case of some products (e.g. cars) a favourable product report in a consumer magazine could be very important for a new product.
- (b) **Place.** The producer must plan for the availability of the product, and the distribution channels to be used. The product must be readily available where consumers would expect to find it. A new product launch should therefore not take place until adequate stocks have been built up to meet anticipated demand.
- (c) **Price.** If the consumer's buying decisions are strongly influenced by price factors, a new product must be launched:
- (i) At an attractive price;
  - (ii) Where appropriate, with suitable available credit facilities (e.g. as with household furniture).
- (d) **Promotion.** Advertising and sales promotions are critical aspects of a successful product launch, to build up customer awareness. Depending on the nature of the product, factors to be taken into account should be as follows.
- (i) The scope of advertising and the advertising message.
  - (ii) Special sales promotions when the product is first launched.
  - (iii) Brand image.
  - (iv) Coinciding the product launch with the date of an important exhibition (e.g. a well-publicised Motor Show).



The 'design' of the marketing mix will be decided on the basis of management intuition and judgement, together with information provided by marketing research. It is particularly important that management should be able to understand the image of the product in the eyes of the customer, and the reasons which make customers buy a particular product. The stages in the formulation of a marketing mix might be as follows:



Other aspects of the marketing mix design which should be noted are as follows.

- A manufacturer of consumer goods will need a marketing mix for the consumer, and an additional marketing mix for the resellers.
- The optimum marketing mix will change over time as the marketing environment changes. (The growth of discount stores and warehouses, for example, might persuade some manufacturers to switch to lower prices for selling through these outlets.)
- The marketing mix will also change over time as the product goes into differed stages of its life cycle. When a product is in its 'growth' stages of life, the marketing mix might emphasise the development of sales outlets and advertising, in its 'mature' phase, there might need to be more concern for product quality, and to postpone the eventual decline, it may be necessary to reduce prices and spend more on advertising.

The ideal marketing mix is one which holds a proper balance between each of these elements.

- One marketing activity in the mix will not be fully effective unless proper attention is given to all the other activities. For example, if a company launches a costly sales promotion campaign which emphasises the superior quality of a product, the outlay on advertising, packaging and personal selling will be wasted if the quality does not live up to customer



expectations. Expensive packaging and advertising will be wasted if distribution inefficiency reduces the availability of goods to the consumer, or the price is too high to attract buyers.

- (b) A company might also place too much emphasis on one aspect of the marketing mix, and much of the effort and expenditure might not be justified for the additional returns it obtains. It might for example, place too much importance on price reductions to earn higher profits, when in fact a smaller price reduction and greater spending on sales promotion or product design might have a more profitable effect.

The marketing mix must be customer orientated and the main principle behind the marketing mix (and the smaller selling mix) is that the arrangement and allocation of resources should be such as to maximise returns per unit of outlay.

The ideal mix for a convenience good (requiring a heavy emphasis on distribution and sales promotion) will be different from that for an industrial good (where price, design quality and after-sales service are more important).

### **Profit Impact on Marketing Strategy (PIMS)**

PIMS analysis attempts to establish the profitability (i.e., return on capital) of various marketing strategies. PIMS researchers, based on their analysis of database of, at least, 3000 firms, believe that 70% of the relative profit performance of an organisation, when compared to similar business, derives from the areas of competitive strength, market attractiveness and productivity.

A research study in the USA found that there was a positive correlation between market share and return on investment so that companies with higher market share earned high returns. Three possible reasons were put forward for this correlation.

- (i) Economies of scale: It enables a market leader to produce at lower unit costs than competitors and so make bigger profits.
- (ii) Bargaining power: A strong position in the market gives a firm greater strength in its dealings with both buyers and suppliers.
- (iii) Quality of management: Market leaders often seem to be run by managers of a high calibre.

However, low market share does inevitably mean poor returns. If this were so, small firm would always make low returns and this is simply not true. A company can prosper with a low market share in the following ways:—

- (i) Market segmentation : New market segments might be a small proportion of the total market, but profitable ; (ii) Emphasising product quality and charging higher prices ; (iii) Wanting to stay small and consciously avoiding growth; (iv) Cost control.

Businesses can also earn good profits with a low market share in a low growth market in the following circumstances:

- (i) The market is stable;



- (ii) Product innovations are rare;
- (iii) Most products are standardised;
- (iv) Companies produce supplies or components for industrial customers and have built up a close working relationship with these customers,
- (v) Repeat buying is frequent,
- (vi) The value added to sales ratio is high.

Finally, some firms are prepared to sacrifice profitability for market share over a period of time. Some Japanese firms were willing to charge low prices to buy market share and totally weaken the competitors whose products were not as deep.

There are practical difficulties with PIMS research which might raise questions about the usefulness. These are as follows:-

- (i) Identifying each market segments properly - an up-market producer is in a different market segment than to a down-market cheap goods producer and it would be wrong to classify them as competitors in the same market.
- (ii) Measuring the actual size of the market and so the company's own market share in proportional terms;
- (iii) Establishing what returns are available from a particular market share.

It has also been argued that PIMS analysis is more relevant to industrial goods markets, where the correlation between high market share and high returns is not so strong.

### **Market Segmentation:**

Market segmentation is the division of a market into fairly homogenous subsets where each subset can be chosen, reached and served by its own tailored marketing mix. Each such homogenous subset is made up of people with approximately similar needs and aspirations which distinguish them from other subsets. Segmentation applies to the personal customer market and the business market.

The criteria for effective segmentation are: measurability; accessibility; action ability; substantiality. There are benefits to both the organisation and to its customers.

- (i) The firm can choose segments with greater profit potential. No firm has unlimited resources and must concentrate their use to promising segments. Segmentation allows tailoring of all the elements and sub elements of marketing mix.
  - Products and services themselves may be fine-tuned to the segment. The costs involved in product testing/development can be reduced by concentrating on specified segments only.
  - The firm can consider differential pricing. Lower unit costs can be achieved.
  - The four promotional sub-elements can likewise be better directed towards the direct segment.



- Facilities can be located and furnished in accordance with the exigencies of the segments
  - Managerial and staff training can be more specific, rapid and effective.
  - The firm also benefits because it forces itself to look at not only the present situation but also the future.
- (ii) Customers benefit from segmentation by being offered those products and services which they are seeking at prices pitched at their level, and their products and services can be packaged in the combination of interest to the segment.

### Branding:

Branding removes anonymity and gives identification to a company and its goods and services. Branding is actually a very general term covering brand names, designs, trademarks, symbols, a distinctive letterhead; an identifiable shop front or van etc., which may be used to distinguish one organisation's goods and services from another's. According to Kotler, a brand is a name, term, sign, symbol or design or combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors. Branding and a firm's reputation are heavily linked.

As appropriate branding is one of the most important activities in the area of marketing of products, especially consumer products, several decisions need to be taken with regard to brand selection and its use. These are:

#### (1) Should the product be branded at all?

The decision to brand or not to brand a product can be taken only after considering the nature of the product, the type of outlets envisaged for the product, the perceived -advantage of branding and the estimated costs of developing the brand. Historically, it is found that brand development is closely correlated with the increase in the disposable income, the sophistication of the distribution system and the increasing size of the national market. The same trend is visible in India now. Several firms have started marketing branded products in such product categories as wheat, flour and refined salt. The reason for such a trend is that a class of consumers are willing to pay more for uniform and better quality product represented by the brand.

#### (2) Who should sponsor the brand?

The question of sponsorship of a brand refers to the decision as to whether it should be a manufacturer's brand, also known as a national brand or a private -brand, also known as a middlemen's brand. This is a major decision in most developed countries, where large chain/departmental stores dominate the retail distribution system. This is however, largely a hypothetical question in India where retail distribution system is highly fragmented. Only super markets have started marketing a few products that are specially packed and sold under their names. However, some retailers' brand names in product categories such as car accessories have already been established.



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**(3) What quality should be built into the brand?**

A very crucial decision is with regard to the quality and other attributes to be built into the product. The matrix of such attributes will decide the product positioning. A marketer has the option to position his product at any segment of the market: top, bottom or the intermediate. Taking an example, “Ariel” is positioned as a premium quality and high priced product. At the other end of the scale, “Wheel” is positioned as low priced.

**(4) Should each product be individually branded or a family brand should be adopted for all the products?**

The marketer also has to decide at the outset whether he would like to adopt a family brand under which all the products of the company would be sold or he would like to brand each product separately. Kissan follows the former policy. The same brand name is used for jam, squashes, juices and sauces. ‘Hindustan Lever’ follows the latter policy. Some firms follow a slightly modified strategy. This involves using brands individually but also giving prominence to the company name or logo in all promotional campaigns as well as in product packaging. For example, Tata group Companies follow this strategy. In many cases a brand extension strategy is adopted for securing additional mileage from a particularly successful product. For example, ‘Lifebuoy Gold’ and ‘Lifebuoy Plus’ are extensions of ‘Lifebuoy’.

**(5) Should two or more brands be developed in the same product category?**

A firm may decide to have several brands of the same product, which to some extent are competing inter se. The basic reason is that, at least in the consumer products, various benefits, appeals and even marginal differences between brands can win a large following. Example: ‘Hindustan Lever’ markets several soaps under different brands for different segments.

**(6) Should the established brand be given a new meaning (repositioning)?**

Over the life cycle of a product, several market parameters might undergo a change. All and each of such changes call for a relook as to whether the original positioning of the product is still optimal or not. Stagnating or declining sales also point to a need for reassessment of the original product positioning. For example, ‘Lifebuoy Soap’ has been repositioned several times in the recent past.



## PART-B

### Major Contents of Part B:

- Linkage between Strategic Planning and Marketing Strategy-
- Strategic Marketing Planning

**Linkage between Strategic Planning and Marketing Strategy-both forward and backward.**

### **Strategic Marketing Planning:**

Marketing planning involves setting Goals and strategies for the marketing effort in the firm. This planning would include the development of long-range programmes for the major ingredients in the marketing mix-the product, the pricing structure, the distribution system and the promotional activities.

“Marketing strategy planning means finding attractive opportunities and developing profitable marketable strategies”.

A marketing strategy specifies a target market and a related marketing mix. It is a big picture of what a firm will do in some market.

### **Steps Involved in strategic Marketing Planning:**

The Planning Process in strategic marketing consists of the following five steps:

- (i) Conducting a situation Analysis.
- (ii) Determining Marketing objectives.
- (iii) Selecting the Target Markets and Measuring the Market Demand.
- (iv) Designing a strategic Marketing Mix.
- (v) Preparing an Annual Marketing Plan.

### **Marketing Strategy Planning:**

Marketing strategy planning means finding attractive opportunities and developing profitable marketing strategies. But what is a “marketing strategy”?

A marketing strategy specifies a target market and a related marketing mix. It is a “big picture” of what a firm will do in some market. Two interrelated parts are needed:

- A target market - a fairly homogeneous (similar) group of customers to whom a company wishes to appeal.
- A marketing mix - the controllable variables which the company puts together to satisfy this target group.



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The customer is surrounded by the controllable variables that we call the “marketing mix”. A typical marketing mix includes some product, offered at a price, with some promotion to tell potential customers about the product, and a way to reach the customer’s place.

Hanes Corporation’s strategy for L’eggs hosiery aims at convenience-oriented young women in urban areas with a consistently high-quality product in a distinctive package. The strategy calls for the product to be available at as many grocery and drug stores as possible. While it’s pricing is more or less competitive, the company supports the whole effort with much promotion - including advertising to final consumers, personal selling to retailers, and sales promotion to both consumers and retailers.

In today’s competitive global market, planning is always strategic in character. A business organisation is to first analyse the business environment to score over competitors. It must have a direction to proceed with the support of all customers, suppliers and the society. Strategic planning provides such proper direction for advancement. Strategic planning is a stream of decisions and actions which enables the organisation to achieve its desired objectives with proper functioning of all its wings. Strategic planning helps an organisation to anticipate trends and thereby avail opportunities of all its decisions and actions.

It is the acute competition in the business world that calls for strategy and strategic planning to organise and manage the affairs of the business. It serves as a corporate defence to avoid any likely adverse consequences. The internal strength and weakness of the organisation in relation to the competition and the opportunities and threats in the external environment of business are required to be thoroughly studied, analysed and evaluated so that any decision and action plan would be effective and favourable to the organisation. The tasks involved in strategic planning are:

1. Defining the business of the organisation.
2. Scanning and analysis of business environment.
3. Assessment of internal strength and weakness.
4. Setting corporate level objectives – deciding the relative priorities of the various business of the organisation and the allocation of the resources.
5. Forging corporate levels strategies.



## PART-C

### Major Contents of Part C:

- Research and Intelligence for Marketing Decision Making

### **Research and Intelligence for Marketing Decision Making:**

Research and intelligence for marketing decision making refers to effective marketing in the domestic as well as international markets. It is imperative to gather relevant information from the market about the customer's demands, customer's needs, aspiration and satisfaction level, the pattern of demand-supply position, the market condition, i.e., whether the market for the product or service is a buyer's market or seller's market, etc. It is also important to study and monitor the pattern of transition from buyer's needs to buyer's wants and also from price to non-price competition. In today's globally competitive conditions it is essential to research the market and have an effective marketing information system. Depending on the market information, experience and marketing intelligence of the senior management personnel is very useful for marketing decision making on the product or service, product upgradation, differentiation, pricing, discounts, target customers, new market, entry into new marketing territory and distribution network. Physical distribution, advertising strategy, incentives, discounts, sales promotion and associated marketing strategy are also based, to a large extent, on research and intelligence.

Research and intelligence are also useful in maintaining external relationships required for the marketing decision. Analysis of the marketing area requires inclusion of the product-market strategy and much that is external to the company. Marketing decisions bring together the company and many external agencies, authorities and environments crucial to its very existence, viz., customers, competitors, and changing environments of business relating to technological, financial and social aspects. In market research, market analysis, market forecasting, sales projection, advertising, direct selling, after-sales service, the marketing organisation brings information back to the company and forward to its customers.

Equally important are the internal relationships regarding research and development, product design and engineering, production engineering, personnel and long-range planning areas. Product managers and project managers strive to accomplish, among other things, effective communication between marketing and other departments, and thus, between the outside world and the internal organisation. In decision making for the company's future business strategy, the most vital information should come from the marketing personnel of the company – the sales forecast as a basis for the budget and financial plan and market research information for product development. Here the level of intelligence of concerned members in value analysis and value engineering technique play a major role in decision making.

In fine, marketing research is the systematic design, collection, analysis and reporting of data and findings relevant to a specific marketing situation facing the company. The usual activities associated with marketing research are: Measurement of market potential, market share



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analysis, determination of market characteristics, sales analysis, studies of business trends, short-range forecasting, competitive product studies, long-range forecasting, etc. A company can have its own marketing research set-up or avail of professional, external help.

The marketing research process consists of five steps:

- (a) Defining the research objectives
- (b) Developing the research plan; this stage requires detailed plan of collection of data through market surveys, observations, mail questionnaire, etc., by appropriate sampling process
- (c) Collecting the information, i.e., implementing the research plan
- (d) Analyzing the information gathered
- (e) Presenting the findings in an appropriate manner

Good marketing research is characterised by the scientific method, creativity, multiple methodologies, model building and cost-benefit measures of the value of information, healthy scepticism and ethical marketing. Research and development may be a major resource in an organisation's strategy – or a staggering weakness to be overcome by a strategy emphasizing other strengths and competencies. Marketing research systems are used to develop, test and predict the effects of action taken or planned in the basic sub systems of marketing (pricing, advertising, design, etc). The sales/marketing function has traditionally been serviced with information contained in the month-end sales report. Generally, these reports have suffered from two shortcomings: They were clerical in nature, and therefore, did not contain decision-making information and they arrived too late for remedial action.

These shortcomings can be overcome with a general marketing information system. Characteristics of this system include an enquiry into the capability located in the field, branch, district and headquarters of offices. These terminals are connected to a computer via teleprocessing facilities, and the system can provide a broad/enquiry coverage relating to sales activity updated on daily basis. The system designer and marketing manager who use the system can design enquiry formats to fit particular needs.

Marketing decision starts with the search for new ideas based on intelligence, maturity and the level of the concerned personnel. A company has to generate many ideas on the basis of marketing research to find a good one. In order to generate systematic and continuous flow of new product ideas, the company must cultivate many idea sources such as customers, competitors, distributors, suppliers, etc. Choosing the relevant information and best idea for marketing decision depends on general intelligence in application and use of relevant marketing information for such a decision-making process.





## STUDY NOTE - 5

# Application of Management Accounting in Strategic Management

## PART-A

### Marketing Strategy

#### Major Contents of Part A:

- Marketing Costs & Profitability
- Product Development Policy & Strategy; Product's Life Cycle Strategy
- Pricing Policies and Strategies
- Marketing Budget and Budgetary Control
- Ratio Analysis
- Evaluation and Control of Sales Activities
- Sales Promotion and Advertisement

#### **Analysis of Marketing Costs & Profitability:**

Marketing and distribution functions account for a major portion of increasing costs towards sales of products and services and have a direct effect on profitability.

There are various elements of marketing costs which vary from company to company in relation to Size, Significance, Measurability and Controllability.

Various elements of marketing costs broadly include the following:

1. Cost of market survey and market research,
2. Cost of advertisement (T.V., radio, newspapers, journals, hoardings, etc.),
3. Sales promotion cost,
4. Overheads and administrative costs for sales and marketing,
5. Physical distribution costs,
6. Warehousing costs,
7. Finished goods inventory holding costs,
8. Costs of distribution channel (Trade discounts for agents, wholesalers, distributors, etc.),
9. Cost of credit sales,



#### 10. Costs for Marketing Information Systems.

For better profitability through sales, it is necessary to analyse the marketing costs and exercise control wherever necessary without hampering the market share and sales volume, as planned for. System development of marketing cost analysis and control is to be designed involving the following exercises:

1. Assigning marketing costs to different segments of marketing functions.
2. Analysing each cost with related functional area of marketing.
3. Assigning the expenses of different functional areas to specified marketing entities – Product-wise, customer group-wise, region-wise, channel-wise.
4. Measuring and analysing the costs by the marketing entities.
5. Studies and evaluation of cost-benefit position for each function broken up over each entity.
6. Identifying the areas for cost control.
7. Methods of cost control – determination of extent of control as remedial measure.

#### **Cost-Benefit Analysis:**

Costs incurred in different segments and functions of marketing need to be evaluated and analysed in terms of results achieved towards profitability. To be more effective, marketing costs should include standard costing for various marketing activities and should be compared with the budget provisions. Standard cost for each and every activity of sales and marketing should be set and then the actual costs are to be noted and measured against the standards. The standard cost approach will highlight what ought to have happened, or what could have happened, if the activity was managed and controlled efficiently with the objective of higher profitability. Cost-benefit analysis should also include the areas such as credit control, credit rating, after-sales service, etc. Any savings in available areas of sales and marketing will also surely be added with profit.

Unless investigation and identification can be made and necessary checks and control can be exercised, the expenditure will go on increasing which will eat up the profitability of the business venture.

#### **Product Development Policy & Strategy:**

##### **Product and the Product's Life Cycle Strategy.**

**Product:** A product is defined as a bundle of potential utility. This emphasises that products are purchased because they are capable of releasing some “benefits” to the purchaser. It may be noted that a consumer is more interested in the benefits he gets from the product rather than the product characteristics in a physical sense. A motorcar no doubt supplies transportation but can also be a symbol of social status and economic achievement. The higher the price of the motorcar the more it is likely to symbolise this psychological aspect. In India a refrigerator is also



a symbol of economic success as most people cannot afford to buy a refrigerator. The question of product characteristics and pricing are inter connected. A product may be regarded from the marketing view point as a bundle of “benefits” which are being offered to the consumer. The job of product planning consists of planning benefits to be released during the use of the product.

Organisations are increasingly recognising the necessity and advantages of regularly developing new products and services, especially in view of changing tastes, technologies and competition. Every product goes through a life-cycle – it is conceived and born, developed through phases and eventually dies as younger products come into the market.

The product life-cycle presents companies with two major challenges. First, because all products eventually decline, the firm must develop a process for finding new products to replace ageing ones – the problem of new product development. Second, the firm must understand how its products age, and adapt and modify its marketing strategies for products as they pass through different life-cycle stages – the problem of life-cycle strategy. Some companies concentrate on managing current products and fail to develop new products to their own detriment. Companies need to strike a balance between these two extremes.

Every company needs a product development programme.

A company can obtain new products in two ways –

- (a) Through acquisition by buying a new company, a patent or a licence to produce someone else’s product.
- (b) Through the efforts of its own research, development and experimentation programme.

## **Product Development:**

**Product concept:** - Product is the vehicle by which a company provides consumer satisfactions.

The product is a bundle of all kinds of satisfaction of both a material and non-material kinds, ranging from economic utilities to satisfaction of a social-psychological nature.

Product fills the needs of the society. They represent a bundle of expectations to consumers and Society. The product concept has 3 dimensions.

- (1) Managerial discussion: It covers the core specifications or physical attributes, related services brand, packages, product life cycle, product planning and development.
- (2) Consumer dimension: To the consumer a product is actually a group of symbols or meanings. A product conveys a message indicating a bundle of expectations to a buyer. Consumer accepts products a bundle of “Satisfactions rather than as physical things”.
- (3) Societal dimension: To the society salutary products are desirable, products are always welcome as they fulfill the expectations of social welfare and social interests. Society dislikes the production of merely pleasing products which only give immediate satisfaction but which sacrifice social interest in the long run, marketing have to fulfill the following social responsibilities while offering the products to consumer:



- (i) Conservation and best use of resources,
- (ii) Safety to users,
- (iii) Quality of life, concern for better environment,
- (iv) Long run satisfaction of consumers,
- (v) Fulfillment of governing regulations relating to competition production, packing and pricing etc.

A product supplies two kinds of utilities,

- (i) Economic utility
- (ii) Supplementary utility.

**Product plan or strategy:** A product strategy is a company plan for marketing its products we have a product programme suitable to the products position, product plan in values on number of issues to be resolved. They are:

- (i) Buy or make polices,
- (ii) Product line polices
  - Product diversification
  - Product innovation and development of new products
- (iii) Product life cycle,
- (iv) Packaging policies,
- (v) Branding policies.

**Buy or Make Policies:** - While producing the product we have to consume some raw materials and other services. Whether these goods are to be bought or made self with in the firm while taking these decisions the following are to be taken into consideration.

- (1) Relative costs: The costs of f.c. and v.c. and their nature and proportion to the total costs and relation to the profits.
- (2) The extent of specialised machinery to be purchased or technology or resources. Whether they are available with in India or to import from other countries, so import and export policy is to be taken into consideration.
- (3) Availability of production, capacity: The capacity of the firm unutilised capacity, fully utilised or partially utilised capacity etc.
- (4) Availability of marketing time and talents required.
- (5) Secrecy of design maintained.
- (6) Willingness to accept seasonal risk.

**Product Line Policies:** - Product line is a group of products that are related either because they satisfy similar needs of different marketing segments or because they satisfy different but related needs of a given marketing segment.



E.g.: Satisfy the need same type to all- Entertainment Products are used together- Toothpaste and Tooth Brush, Blade and Razor, Pencil and Sharpener.

Product Item: - A product item is a specific version of product that has separate designation in the sellers list.

Product Mix: - It is the entire range of products of a company for sale.

For e.g.: The product mix of HMT includes a diverse range of products such as watches, machine tools, Tractors, printing machinery and electric lamps.

The product mix of a company has three, main characteristics.

- a) Product width: number of different products lines formed in group.
- b) Product breadth: refers to the question whether or not the products have production affinity, marketing affinity or research affinity.
- c) Product depth: depends upon the number of product items with in each product line.
- d) Product Consistency: The product line that consists the number of items in each line.

**(a) If we employ product diversification:**

To improve the sales some points are taken in to consideration while making products diversification.

1. If product diversification is taken place risk increases and cost of machineries, advertising cost, and specialised experts for the machinery etc. will also increases.
2. Compensation of risk: Compensation of risk or balance of the risk. Out of 10 units only 6 units are running well and remaining are on losses, so in between these two kinds of units balance is maintained.
3. Financial Resources: If product diversification is made huge finance is required to purchase and install new machinery maintaining export staff etc. to be taken in to consideration.
4. Organisational Net work.
5. Established channel: Whether it is better to advertise through established channel or to change the channel to communicate the information.

**(b) Product Innovation and Development of New Products:**

One of the major challenges in marketing planning is to develop ideas for new products and to launch than successfully. The company will have to find replacements for its products that have entered the decline stage.

The new product planning gap can be filled in two ways:

- (i) Acquisition
- (ii) New product development.

Acquisition may be in 3 forms they are:

- (i) Corporate acquisition



(ii) Patent acquisition

(iii) License acquisition

In all the 3 areas company does not develop any new products but simply acquires the rights to existing ones. New product development may be internal new product.

Development and contrast new product development new product include - original product, product improvements, product modifications, and new brands that a firm develops through its own R & D efforts.

Categories or new products in terms of their newness to the company and to the market place:

**New to the world products:** New products that create entirely new market.

**New product lines:** New products that allow a company to enter into an established market for first time.

Additions to the existing product lines new products that supplement a company's established product lines.

**Improvements in provisions to existing products:** new products that provide improved performance or greater perceived value and replace existing goods.

**Repositioning:** Existing products that are targeted to new markets or marketing segments.

**Cost- Reductions:** new products that provide similar performance at lower cost.

**Need For Innovation:** The following factors responsible for the need of innovation:

**Market changes:** preference changes in customers habits.

**Technological changes**

### Profit less Price Competition:

i. Price competition (weapon)

ii. Non-Price competition is diversification of risk.

- To utilise waste scrap,
- To escape from the fluctuations in seasonal demand,
- To attract customers and to increase sales.

Under modern conditions of competition, companies that do not develop new products risk much. Such companies will find their products falling victims to changing consumer needs and tastes, new technologies- shortened product life cycles, and increased - domestic and foreign competition. Successful new product development may even be more difficult to achieve in future for the following reasons:

**Shortage of important new product ideas in certain areas:** There are very few new technologies of investment magnitude of the automobile, T.V. Computers and wondering etc.

**Fragmented markets:** Keen competition is leading to increasingly fragmented markets. Companies aim at new products at smaller market segments.



**Social and Government constraints:** New product have to satisfy public and Government. Government approval is needed regarding innovation in the industries like chemicals.

**Costliness of the new product development process:** A company has to separate many new products, ideas in order to finish with a few good ones. Each product costs more to develop like manufacturing, media, and contribution costs.

**Capital shortage:** many companies cannot afford or raise the ends needed to research true innovations.

**Shorter growth periods for successful products:** When a product is successful, rivals may compete and its growth stage is shortened.

New product development work is taken by the organisation several ways like product managers, new product managers, new product committees, new product departments, new product mature learners etc.

### Steps for New Product Development:

1. **Generation of New Product Ideas:** New product development process starts with the searching for ideas. The sources of new product ideas are born from customer's needs and wants, scientists, competitors, sales representatives. Search institutions, dealers, agents, consumer's councils, Trade persons. Top management inventory, patent attorneys, university and commercial laboratories, Industrial consultants, advertising agencies, and industrial publications etc.

Good ideas come out of inspiration, perspiration and techniques.

2. **Screening of Ideas:** In Screening stage the company must avoid many ideas and select one good idea. The purposes of receiving are to spot and drop poor ideas as early as possible. The rationale is that product development costs rises at each developmental stage. When products reaches later stages, management often feels that they have invested so much in developing the product, that it should be launched to recoup some of the investment.

3. **Concept Development testing:** Consumers, however do not buy product ideas but they buy product concepts. Any product idea can be learned into several product concepts. The question is to be asked like who is to use this product?

(Powder → infants, children, teenagers, young, Adults and old etc.)

What benefit should be built in to this product?

(Taste, refreshment, energy) and what is the occasion

(Drink → breakfast, mid-morning, lunch, dinner, late evening. By asking these questions, a company can form several product concepts.)

While developing the product concepts product position is also most important to think. An instant break-fast drink would compete against bacon and eggs, cereals, coffee, and pastry. And cost of preparation and time is to be think.

Concept testing calls for testing these concepts with an appropriate group of target customers.



4. **Business Analysis:** Management must review the sales, costs, and profit projection to determine whether they satisfy the company's objectives. Once the best product concept is picked up, it will be subjected to scrutiny, to evaluate its marketing potential, capital investment rate of return on capital, demand analysis, cost and profit analysis to be made and sales estimation (estimating-first time sales and repeat sales)

5. **Product Development:** - We have 3 types of steps in this stage when a paper idea is duly converted in to physical produce.

- (a) Prototype development giving visual image of the product.
- (b) Consumer testing of the model or proto-type
- (c) branding, packaging, and labelling.

Consumer testing of the model products will provide the ground for final selection of the most promising model for mass production and mass distribution.

6. **Test Marketing:** Entire product marketing programme is tried for the first time in a small number of well selected test cities or areas.

E.g.: Fresca Soap → was first test-marketed in A.P.

Test marketing is necessary to find out the viability to full marketing programme for national distribution. Customer's relations can be found under normal market conditions. It helps the company to learn through trial and error and get additional sales clues for product improvement and for modifications in our marketing mix. We can use test markets for testing effectiveness of all ingredients of our marketing.

7. **Commercialisation:** once the test marketing gives green signal for the product with or without expected modification. The company can proceed to finalise all features of the product. The marketing management can launch full-fledged advertising and promotion campaign for mass distribution. Mass production will start and all distribution channels will be duly organised.

8. **Product Review and Evaluation:** Assessment or the product evaluation is the final step to review the product's popularity in the society.

#### **Factors taken in to consideration while innovating the products:**

1. The market demand,
2. Whether product fits to the existing structure of the company,
3. The production structure (Capacity),
4. Financial structure,
5. The legal considerations,
6. The Managerial Resources,
7. Over-all image of the company,
8. The considerations of middlemen.



## Why New Products Fail?

Following are the reasons for the failure of new products.

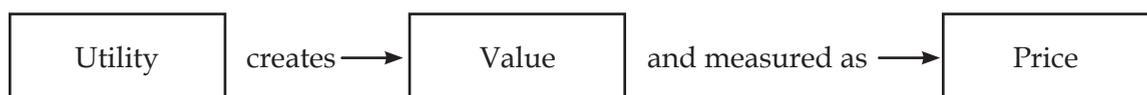
1. In-adequate market analysis and market appraisal,
2. In-sufficient and in effective marketing support,
3. Bad-timing of introducing a new product,
4. Failure to recognise rapidly changing market environments,
5. Absence of formal product planning and development procedure,
6. Failure of the product to fill the customer's needs,
7. Technical and production problems,
8. Higher costs than estimated costs,
9. Product problems and its defects,
10. Failure to estimate the strength of the competitors,
11. Too many new products entering the market.

## Pricing Policies and Strategies:

A price is simply an offer or an experiment to test the pulse of the market. If customers accept the offer, then the price is fine. If they reject it, the price usually will be changed quickly, or the product may even be withdrawn from the market.

## Importance of Price:

1. **In the Economy:** The market Price of a Product influences wages, rent interest, and profits. In its role as an allocation of source resources, price determines what will be produced (supply) and who will get how much of the goods and services that are produced (demand). Pricing takes an added importance during periods of inflation and recession. The following are the areas affected by Price changes during inflation and recession (a) consumer confidence (b) consumer buying psychology and (c) consumer buying behaviour etc.
2. **In the Individual Firm:** The Price of a product or service a major determinant of the market demand for the item. Price affects the firm's competitive position and its share of the market. As a result, price has a considerable bearing on the company's revenue and net profit. The price of a product also affects the firm's marketing program. The current state of the economy has a considerable influence on the importance that business executives consider that pricing is an extremely important activity contributing to marketing success.
3. **Price and Product Quality Relationship:** Any line Price is not an indicator of products quality. Studies have consistently shown that consumer's perceptions of product quality vary directly with Price.





Price is the amount of money that is needed to acquire some combination of a product and its accompanying services.

**Pricing Objectives:** Every marketing task- including pricing - must be directed toward the achievement of a goal. The main goals in pricing are oriented either towards profit, towards sales or toward maintaining the status quo. They are:

1. Profit-oriented, to:
  - (a) Achieve target or on net sales.
  - (b) Maximise Profits.
2. Sales oriented, to:
  - (a) Increase sales
  - (b) Maintain or Increase market-share.
3. Status-Quo-oriented, to:
  - (a) Stabilise prices
  - (b) Meet competition.

#### 1. Profit-Oriented Goals:

By Selecting profit maximisation or a target return, management focuses its attention on profit generation. Profit goals may be set for either the short-run or for longer periods of time.

- (a) **Achieve Target Return:** A firm may price its products or services to achieve a certain percentage return on investment or on its sales. Such goals are used by both middlemen and manufacturers. Many retailers and whole sellers use target return on net sales as a pricing objective for short-run periods. They set on percentage make-up on sales that is large enough to cover anticipated operating “costs plus a desired profit” for the year. Achieving a target ROI is typically selected as a goal by manufacturers that are leaders in their industry of General and Union carbide.
- (b) **Maximise profits:** A profit maximisation goal is likely to be far more beneficial to a company and to the public if practiced over the long-run. Efficient firms are rewarded, and inefficient firms disappear. Profits attract new capital in to the field. Prices tend to remain at a reasonable level and supply is sufficient to satisfy market demands.

To maximise profit over the long run, firms may have to accept short-run losses. A firm entering a new geographic market or introducing a new product frequently does best by setting low prices to build a large clientele. The goal should be to maximise profits on total out-put rather than on each single item marketed. A manufacturer may maximise total profits by practically giving some articles that will attract the buyer’s attention or stimulate; sales of other goods.

#### 2. Sales Oriented Goals:

In some companies, management’s pricing attention is focussed on sales volume rather



than on profits. In these situations, the pricing goal may be to increase sales volume or maintain or increase the firm's market share, i.e.,

- (a) Increase sales volume
- (b) Maintain or increase Market share.

### 3. Status-Quo Goals:

To stabilise prices and to meet competition - are the least aggressive of any of the pricing goals.

- (a) **Stabilise prices:** Price stabilisation often is the goal in industries with a price leader. Especially in industries where demand can fluctuate frequently and some times considerably, large companies will try to maintain stability in their pricing.
- (b) **Meet Competition:** Count less firms regard less of size, consciously price their products simply to meet the competition. Large rubber companies, such as Good year, for example believe that they can generally exercise only very little influence on the market - determined price.

## Factors Influencing Price Determination:

By base Price (or list Price) we mean the price of one unit of the product at its point of production or resale. In the Price-determination process, several factors usually influence the final, decision. The key factors that management should consider are as follows:

### 1. Demand for the Product:

An important step in pricing a produce established product than for a new one. Two practical steps in demand estimation are, first, to determine whether there is a price that the market expects and second to "estimate the sales volumes at different prices".

- (a) **The expected price:** The expected price for a product is the price at which customers consciously or unconsciously value it what they think the product is worth.
- (b) **Estimates of sales at various prices:** It is extremely help to estimate what the sales volume will be at several different prices. Here experience with, the product or with like products is the best source of information.

### 2. Target Share of Market:

A company striving to increase its market share may price more aggressively than a firm that wants to maintain its present market share. The expected share of the market is influenced by present production capacity and case of competitive entry.

### 3. Competitive Reaction:

Present and potential competition is an important influence in determining a base price. The threat of potential competition is greatest when the field is easy to enter and the profit prospects are encouraging. Competition can also come from three other sources.

- (i) Directly similar products



- (ii) Available substitutes
- (iii) Unrelated Products.

#### 4. Cream-Skimming Pricing vs. Penetration Pricing:

In the course of pricing a product, especially a new product, management should consider whether to enter the market with a high price or a low price. These opposite alternatives are popularly referred to as skim-the-cream pricing and penetration pricing.

- (a) **Skim the cream pricing:** - It involves setting a price that is high in the range of expected prices. The seller may continue with this strategy for an indefinite period. Skim the cream pricing is particularly suitable for new products because.
- In the early stages of a product's life cycle, price is less important, competition is minimal, and the product's distinctiveness tends it self to effective marketing.
  - This strategy can effectively, segment the market on an income basis.
  - This strategy acts as a strong hedge against a possible- mistake in setting the price.
  - High initial prices can be used to keep demand within the limits of a company's productive capacity.
- (b) **Penetration Pricing:** In penetration pricing, a low initial price is set to reach the mass market immediately. Penetration pricing is likely to be more satisfactory than cream-skimming pricing when the following conditions exist:
- (i) The Quantity sold is highly sensitive to price. The product has highly sensitive and sub-stantial reductions in unit production and market costs can be achieved through large-scale operations.
  - (ii) The product is expected to face very strong competition soon after it is introduced to the market.
  - (iii) The high-income market is not large enough to sustain a skim the cream price.

If competitors can enter a market quickly, and if the market potential for the product is very promising, management probably should adopt a policy of penetration pricing. Low initial pricing may do two things.

- It may discourage other firms from entering the field.
- Low initial pricing may give the innovator such a strong hold on its share of the market that future competitors can not cut into it.

#### (5) Other Parts of the Marketing Mix:

In the course of determining the base price, management should consider the other major parts of its marketing mix.

- **The Product:** We have already observed that the price of a product is influenced substantially by whether it is a new item or an older, established one. The importance of the product in its end use must also be considered.



- **Channels of distribution:** The channels selected and the types of middlemen used will influence a manufacturer's pricing. A firm selling both through whole sellers and directly to retailers often sets a different factory price for each of these two classes of customers.
- **Promotional methods:** The promotional methods used, and the extent to which the product is promoted by the manufacture or middlemen are still other factors to consider in pricing.

(6) **Select the Specific Price:** on the basis of above information, select an appropriate price.

### Basic Methods of Setting Prices:

Over the years, many different methods have been used by individual companies to establish base price setting is variations of the following methods —

- Prices are based on total cost plus a desired profit.
  - Prices are based on balance between estimates of market demand and of supply.
  - Prices are based on competitive market conditions.
1. **Cost Plus Pricing:** In its simplest form, cost - plus pricing means setting the price of one unit's total cost plus the desired profit on the unit. While this is a very simple and easily applied pricing method, it has one serious limitation. It does not account for the fact that there are different types of costs, and that these cost are affected differently by increase or decreases in out-put.

**The Cost concepts:** The total unit cost of a product is made up of several types of costs. They are (ATC = AFC + AVC) fixed cost, TFC, AFC, VC, TVC, AVC, TC, ATC, and MC etc.

- (a) **Refinements in cost-plus pricing:** Once management understands that not all costs react in the same way to out-put increases or decreases, refinements in cost-plus pricing are possible.
- (b) **Prices Based on MC only:** Another approach to cost plus-pricing is to set a price that will cover only the M.C not the T.C. M.C.Pricing may also be used when one product is expected to attract business for another. A departmental store, for example, may price meals in its tea room at a level that covers only the MCs.
- (c) **Cost plus Pricing by Middlemen:** Cost plus pricing is widely used by retailing and whole selling middlemen. At least it seasons this way at first glance. To simplify pricing and accounting, the retailer may add the same percentage mark-up to every product. This is on average mark up that the retailers experiences have shown is large enough to cover the costs and profit for the store.
- (d) **Evaluation cost-plus Pricing:** Actually, it provides a good point of departure, for our discussion of price determination. Also cost plus pricing is mentioned so widely in business that it must be under stood. Adherents of cost-plus pricing point to its simplicity and its ease of determination. Cost plus pricing is a weak and unrealistic method because it completely ignores the influences of competition and market demand.



**Break-Even Analysis (BEA):** One way to use market demand as a basis for price determination, and still consider costs, is to approach pricing through a break-even analysis and on determination of BEA.

**BEA Related to market Demand:** The major limitation of BEA as a realistic pricing tool is that it ignores the market demand at the various prices. It is still essentially a tool for cost plus pricing. Deficiency in BEA can be remedied by estimating the total and that actually exists at each of several different selling prices. Then this market information can be super imposed on our B.E. Chart.

**Evaluation of B.E. Analysis:** Certainly no one should claim that B.E. analysis is the perfect pricing tool. Many of its underlying assumptions are unrealistic in a practical-business operation. It assumes that costs are stable. Thus B.E.A. has limited value in companies where there are wage cost fluctuations frequently.

2. **Prices Based on A Balance Between Supply and Demand:** Another method of price setting involves balancing demand with costs to determine the best-price for profit maximisation. This method of price determination is thus best suited for companies whose pricing goal is to maximise profit.

The market situation facing most firms in the U.S. today is of monopolistic or imperfect competition. This is characterised by product differentiation and non-price competition.

**Determining the price:** To use this pricing method the price settlers must understand the concepts of average and marginal revenue, in addition to average and marginal cost. Marginal-Revenue is the income derived from the sale of the last unit to marginal unit. Average revenue is the unit price at a given level of unit sales. It is calculated by dividing total revenue by the number of units sold. We assume that a firm will continue to produce and sell more units as long as the revenue from the last unit sold exceeds the cost of producing this last unit. That is, out-put continues to increase as long as M.R. exceeds M.C.

**Evaluation of supply Demand Pricing:** Supply and demand analysis as a basis for price setting has enjoyed only limited use. Supply and Demand analysis can be used, they fear to study Post price movements, but it can not serve as a Practical basis for setting prices. Because of limited Production facilities, manufacturer may prefer to adopt a cream skimming strategy.

3. **Prices set in relation to market alone:** Cost plus pricing is one extreme among pricing methods, at the other end of the scale is a method where by a firm's prices are set in relation to only the competitive market - Price. The seller's price may be set right at the market price to meet the competition or it may be set either above or below the competitive market-price.
  - (a) Pricing to meet competition,
  - (b) Pricing below competitive level and
  - (c) Pricing above competitive level.

### Ways in which a base price can be modified or Pricing Policies:

- (1) Cost plus Pricing (Mark up pricing, Trading up and Trading down-Pricing.)



- (2) Prices living
  - (3) Leader Pricing
  - (4) Psychological pricing.
  - (5) Single vs. variable pricing
  - (6) Resale price maintenance
  - (7) Geographical pricing
  - (8) Price discounts
  - (9) Pricing in periods of inflation.
1. **Discounts and Allowances:** Discounts and allowances result in a deduction from the base (or list) price. The deduction may be in the form of a reduced price or some other concession, such as free merchandise.
    - (a) **Quantity Discounts:** Quantity discounts are deductions from the list price offered by a seller to encourage customers to buy in larger amounts or to make most of their purchases from that seller. The discounts are based on the size of the purchase, either in Rupees or in units.

A non-cumulative discount is based upon the size fan individual order of one or more products. Non-cumulative - quantity discounts are based on the total volume purchased over a period of time. These discounts are advantageous to a seller because they tie customers more closely to that seller.
    - (b) **Trade Discounts:** Trade discounts, some times called, functional discounts, are reductions from the list Price offered to buyers in payment for marketing functions that they will presumably perform.
    - (c) **Cash Discounts:** A cash discount is a deduction Granted to buyers for paying their bills with in a specified period of time. The discount is computed on the net amount due after first deducting trade and quantity discounts- from the base price. Every cash discount includes 3 elements.
      - The percentage discount it self.
      - The time period during which the discount may be taken and
      - The time when the bill becomes over due.
    - (d) **Other Discounts and Allowances:** A firm that produces articles, such as air conditioners, that are purchased on a seasonal basis may consider the policy of Granting a seasonal discount. Forward dating is a variation of both seasonal and cash discounts. Promotional allowances are price reduction granted by a seller in payment for promotional services performed by buyers.
  2. **Geographic Pricing Strategies:** In its Pricing, a seller-must consider the freight costs involved in shipping the product to the buyer. This consideration grows in importance as freight becomes a larger part of total VCs. Pricing policies may be established where by the buyer pays all the freight, the seller bears the entire costs or the two parties share



the expenses. The chosen strategy can have an important bearing on (1) The geographic limits of a firm market as the location of this production facilities, (2) the source of its raw materials, and (3) its competitive strength in various market areas, the various methods are

- (a) FOB Pricing or point of production pricing,
  - (b) Uniform Delivered Pricing,
  - (c) Zone Delivered pricing and
  - (d) Freight Absorption Pricing.
3. **Single vs. Variable Price Strategy:** Under a one price strategy, the company charges the same price to all similar customers who purchase similar quantities of the product. Under a variable price strategy, the company might sell similar quantities to similar buyers at different prices; the price is usually set as a result of bargaining.
  4. **Unit Pricing:** Unit Pricing is a retail Price information reporting strategy that, to date, has been employed largely by super market chains. The method is however adoptable to other types of stores and products. The strategy is a business response to consumer protests concerning the proliferation of package sizes. In unit Pricing for each separate product and package size there is a shelf label that states (1) the Price of the Package (2) this price expressed in rupees per kg. etc. Unit Pricing was instituted in the RIO's.
  5. **Price Lining:** It consists of selecting a limited no. of prices at which a store will sell its merchandise. The main advantage is it simplifies buying decisions. Rising costs can put a real squeeze on price lines because a company hesitates to change its price lines every time costs go up. Where price lines are traditional as they are for candy bars, manufactures may reduce the product's size or quality to enable retailers to hold prices at existing levels.
  6. **Resale Price Maintenance (RPM):** Some manufacturers want control over the prices at which retailers resell the manufacturer's products. For some products that follow a policy of providing suggested list prices the price is just a guide for retailers.
  7. **Leader Pricing:** Many firms, primarily retailers, temporarily cut prices on a few items to attract customers. This price and promotional strategy is called leader pricing, and the items whose prices are cut are called loss leaders. These leader items should be well known, heavily advertised articles that are purchased frequently.
  8. **Psychological Pricing - Odd Pricing:** It can be clearly explained by an illustration. Some organisations like "Bata" shoe company will set the price at odd amounts, such as 39-95, 56-95, 78-95 and 97-95 etc. Always buyer bothers about the Rupees but not paisa. It is buying psychology.
  9. **Pricing in Periods of Inflation:** Inflation presents some real problems to executives in their management of a marketing program- especially in the area of pricing. Management must develop innovative and creative pricing strategies to meet the continuing challenge of inflation.

The management of Price-increase strategies involves the timing, size, and method of implementing the increase. Here are a few examples.



- Some companies now charge extra for services that once were included as a part of the base price. A firm may now charge extra for delivery, repairs, or some types of credit sales,
  - Management may reduce the percentage of cash or quantity discounts.
  - Long-term Sales contracts may include price-escalator clauses.
  - Some firms simply add a flat percentage surcharge to prices quoted in catalogs, menus, or other printed price lists.
10. **Price vs. Non-Price Competition:** In the course of developing its marketing program, management has a choice of emphasising price competition or non-price competition.
- (i) **Price Competition:** A firm can effectively engage in price-competition by regularly offering prices that are as low as possible. Along with this, the seller usually offers a minimum of services. A firm can also use price to compete by (1) changing its prices and (2) reacting to price charges made by a competitor.
- (a) **Price changes by the firm:** Any one of several situations may prompt a firm to change its price as
- costs increases,
  - aggressively promote the product,
  - share of the market is declining,
  - alternative may be to improve their own marketing program.
- (b) **Reactions to competitor's Price Changes:** Advance planning is particularly necessary in the case of a competitive price-reduction, since time is of the essence. If a competitor boosts prices, a reasonable delay in reacting will-probably not be perilous. In fact, it may turn out to be the wise thing to do if this increase was a mistake.
- (ii) **Non-price competition:** In price competition, sellers attempt to move up or down their individual demand curves by changing prices. In non-price competition -sellers attempt to shift their demand curves to the right by means of product differentiation, promotional activities as some other device.
- (a) Product differentiation,
  - (b) Variety,
  - (c) Quality-of their services and
  - (d) Trading stamps: which can be exchanged for gifts or cash - as a method of non-price competition has influenced over the years.

Price is a complex variable because, manufacturers, wholesalers, retailers, consumers, public policy makers - all influence and are influenced by the price and pricing of a product, service or an idea. Pricing programmes are fundamental in whole scheme of marketing because:

1. All products, services and ideas have a price, even if they are free. That is, marketing managers must fix their price.



2. Price decisions can be made more frequently than other decisions which can be implemented immediately.
3. From budgeting stand point, price is fundamental for price decisions impact the percentage contribution or margin.
4. Pricing decisions have important implications for advertising, sales, distribution and sales-promotion programmes. Pricing as a marketing function has vital role to play at micro and macro levels of the economy of any country. Its importance is spelled out by the following point.

In the economic system, price is the mechanism for allocating resources and reflecting the degrees of both risk and competition, in an economy particularly frees market economy and to a less extent in controlled economy, the resources can be allocated and reallocated by the process of price reduction and price increase. Price policy is a weapon to realise the goals of planned economy where resources can be allocated as per planned priorities. Price is the prime mover of the wheels of the economy namely, production, consumption, distribution and exchange. As price is a sacrifice of purchasing power, it affects the living standards of the society; it regulates business profits and, hence, allocates the resources for the optimum output and distribution. Thus, it acts as a powerful agent of sustained economic development.

The power of price to produce results in the market place is not equalled by any other component in the product-mix. It is the greatest and the strongest 'P' of the four 'Ps' of the mix. Marketing manager can regulate the product demand through this powerful instrument. Price increases or decreases the demand for the products. To increase the demand, reduce the price and increase the price to reduce the demand. Price has a special role to play in developing countries where the marginal value of money is high than those of advanced nations. Demarketing strategy can be easily implemented to meet the rising demand for goods and services. As an instrument, it is a big gun and it should be triggered exclusively by those who are familiar with its possibilities and the dangers involved. It is so because, the damage done by improper pricing may completely sap the effectiveness of the well-conceived marketing programme. It may defame even a good product and frame well a bad product too.

Price as a competitive weapon is of paramount importance. Any company whether it is selling high or medium or low priced merchandise will have to decide as to whether its prices will be above or equal to or below its competitors. This is a basic policy issue that affects the entire marketing planning process. Secondly, price does not stand alone as a device for achieving a competitive advantage. In fact, indirect and non-price competitive techniques often are more desirable because, they are more difficult for the competitors to copy. Better results are the outcome of a fine blend of price and non-price strategies. Thirdly, there is close relationship between the product life-cycle and such pricing for competition. There are notable differences in the kinds of pricing strategies that should be used in different stages. Since the product life span is directly related to the product's competitiveness, pricing at any point in the life-cycle should reflect prevailing competitive conditions.

Price of a product or products determines the profitability of a firm, in the final analysis by influencing the sales revenue. In the firm, price is the basis for generating profits. Price reflects corporate objectives and policies and it is an important ingredient of marketing mix. Price is



often used to off-set the weaknesses in other elements of the marketing-mix. Price changes can be made more quickly than any other changes in the product, channel, and personal selling and sales-promotion including advertising. It is because, price change is easily understood and so communicating to the buyer in precise way. That is why, price changes are used frequently for defensive and offensive strategies. The impact of price rise or fall is reflected instantly in the rise or fall of the product profitability, thinking that other variables are unaffected.

In the areas of marketing management, countless and crucial decisions are to be made. Comparatively marketing decisions are more crucial because, they have bearing on the other branches of business and more difficult as the decision-maker is to shoot the flying game in the changing marketing environment. Normally, profit or contribution is taken as a base for pay-off conditions. Price can be a better criterion for arriving at cut-off point because, price is the determinant of profit or contribution. Price as an indicator, has a special role in the decision-making process in developing countries because, consumer response to price changes will be more quick and tangible as people have higher marginal value of money at their disposal. For instance, if it is a decision regarding selecting product improvement possibilities, select that possibility which gives the highest price as compared to the cost.

These five points make product pricing an important and major function of marketing manager. However, until recently, it has been one of the most neglected areas of marketing management. In fact, we must have a specialist in pricing as we do have in other functions of marketing. This negligence is quite evident from the fact that even the well-known companies in the world price their products on simple concepts of costs-market position - competition and desired profit. Scientific pricing is much more than this easy exercise.

### **The Objectives of Pricing:**

Like other area of marketing planning, pricing of products begins with the setting of pricing objectives. Pricing objectives are the foundations for the price policies objectives. Pricing objectives are the foundations for the price policies and strategies to be framed and implemented in due course. The process of establishing objectives is structured by the firm's internal environment. In fact, a very large number of price objectives are available. The point lies in that these price objectives must be consistent with the organisation's internal thrust and compatible with the external environment. It is because; price objectives are to serve as the basic standards for measuring managerial performance for effective monitoring, coordinating and planning. The most widely accepted price objectives are outlined below:

#### **Survival:**

Survival is the most fundamental objective in most cases. Organisations tolerate almost any kind of deficiency say, short-run losses, internal organisation, reduction in the size of operations and the like in order to continue in existence. Therefore, at least in the short-run, some organisations price products with objective of obtaining working capital for uninterrupted operations. However, survival price objective is a short-run or a temporary goal and is insisted only when the firm faces a survival crisis. Once, it turns the corner, it shifts to other price objectives.

**Target Return on Investment:**

Pricing for profit is the most logical price objective. Pricing to attain predetermined profit involves the establishment of specific profit goals either as a percentage of sales or a R.O.I, or R.O.A.M. (Return on Assets Managed). Price decisions based on investment return are becoming very common both in private and public sector undertakings, these days. This objective expects a certain predetermined rate of return on capital-employed over a period of time. That is, the sales revenue arrived at the end of financial year is enough to cover all the costs and leave desired margin equal to the rate of return. Most target return on investment price objectives is achieved by intuition or trial and error rather than by the use of predictable models to generate profit level.

**Market Share:**

Market share is really a meaningful measure of the success of a firm's marketing strategy. A market share price objective can be either to maintain the market share, to increase it or some times to decrease it. The company uses the price as an input to enjoy a target market share. Target market share means that portion of the industry sale which a company aspires to attain. This market share means that portion of the industry sale which a company aspires to attain. This market share is normally expressed as a percentage of the total industry sales. Price is typically one of the most important variables in improving or maintaining market share. However, if the market share objective is pursued without regard to other objectives, it may not achieve the organisational goals. Price flexibility and, often, profits are linked to firm's market share position. In all developing countries, they prefer market share price objective to rate of return objective. This price objective helps to maintain and meet the restrictions laid down by the laws of the land. Thus, MRTP act of 1969 says that no company is to develop to such an extent as to call it 'dominant'. The solution lies reducing the market share.

**Cash-Flow Management:**

Product pricing decisions are extremely important to the financial manager. In the past, marketing plans did not, as a rule, make any major claim on a company's cash reserves. Today, the marketing world has changed drastically. The rapid expansion of new product research and decentralised distribution net-works and the explosions of aggressive selling have made it necessary to commit sums of money to marketing. Since there are many other demands within the firm, it is quite imperative that the price objective is to retain as much cash possible within a give period of time. This is of particular importance in case of those firms that spend a lot on product research and development like chemicals, electronics, Pharmaceuticals and so on. Even the consumer packaged goods marketers incur heavy product introduction costs in the form of advertising. These sunk costs are to be covered early at a faster rate.

**Price and Profit Stabilisation:**

Stabilising prices and profits can be a long-term objective of a firm. Fluctuating prices having fluctuating profits bringing into play unwanted forces affecting the firm's economic health and status in market place. Stabilisation of prices and margins is more critical industries where oligopoly prevails. For example, in marketing of most basic metals, it is an accepted practice of the majority of the firms to follow the price-leader. The role of a price leader is generally that of



maintaining stable prices in an industry in which erratic and irresponsible pricing moves would result in undesirable changes in market share and profits. Stable prices help in preventing price wars amongst the competitors. This stable price and profits objective can be set in motion by keeping the prices between the safe limits - not allowing them to fall below a norm during slump and not allowing them to rise above norm during boom.

### **Resource Mobilisation:**

Mobilising the resources for either self-development or reinvestment else where can be another price objective. Prices are deliberately set high in certain cases so as to make not more profits but to generate more surplus for the purpose of reinvestment in the same firm or other firms. Thus, State Trading Corporation of India has been following this objective on all the imported stuff sold in Indian market. One such example is imported cars. Similarly, petrol rates are kept very high as it yields a good easy surplus because; gasoline automobiles depend fully on petrol. As a governmental exercise, it works well and to that extent the general public escapes tax axe on their backs. This price objective is most commonly found in developing countries where it adds to the revenue ex-chequer for reallocation.

### **Meeting killer Competition:**

Price can be used as a weapon to meet the competition or eliminate it. Matching or marring the competitors is the simplest strategy in case of those companies that are more interested in non-price strategies. Meeting of competition implies keeping more or less same prices as fixed by the competitors. Here, quality and cost considerations are to be taken more or less identical. In case of such price policy, consumers are at a loss to decide only by price. They go by other points such as weight, colour, dimensions, package smell, and feel appearance etc. This can be called as maintenance pricing. As opposed to this, a firm is to follow destroyer policy followed in order to warn off possible entrants or to compel the competitors to leave the line. In latter case, such a policy is more successful if the competitor has the higher costs, so that he cannot afford lower prices.

### **Profit Maximisation:**

Profit maximisation is the age-old objective of pricing. Here, price policy followed by the management helps the firm to maximise its earning under given market conditions. Maximisation of profits is of the overall activities of the firm and not in case of each product item because, it means exploitation and goes against the concept of social responsibility of charging reasonable profit. Profit maximisation can be a long-term objective because, at the early stages of product life-cycle, there is need for building up minimum market share, sales volume which is possible with lower prices and lower margins. Many a times, a firm may wish to sacrifice some short-run profits by pricing lower than pricing higher so that it keeps out competitors, thereby maximising the profits in the long-run. However, long-run profit maximisation is very difficult to estimate because, the environment is hard to predict beyond the short-run.

### **Maintaining the image:**

Every company has an identity from the moment it opens its doors. It is an identity representing what it has done to convey the public. It is the sum total of the impression that the people



have about the firm. It is about its products-packages-trade marks-brand names-employees-graphics the marketing programme and the like. This image is deeply influenced by how the company handles the delicate and sharp weapon of pricing. For instance, a firm known for high quality and high priced products will lose its current clientele if it goes in for low quality and low priced products. As a result the high quality and high priced products are likely to lose their original image so far enjoyed. It is true conversely also. However, a company image well established will favour price policies of its choice because; the customers have accepted the company. Thus, in India, if Philips, Hindustan Lever, Tatas and the like follow the price policy that is supported in the light of their long-standing reputation. Thus, pricing policy can build an image, make it or mar it, though image insulates the changes in price policies.

## Budgetary Control in Marketing:

### Marketing Budget and Budgetary Control:

An organisation eventually installs a budgeting system to improve its control of cash flow. Management estimates total sales for the coming year and the associated costs and cash flows. Department managers prepare budgets for their departments. The budgets are financial and do not require the level of thought that goes into real planning. Budget should not be confused with full-scale plans although budget is the translation of all activities of a department or of the entire organisation into monetary terms. In order to prepare a realistic budget, proper forecasting and marketing projections in a changing business environment are very essential. These will cover all those environmental factors and variables that are critical to any organisation and evaluation of the same in the light of the plan or action. Further, it is required to be matched to the organisation's own strategies taking into consideration the following important factors:

1. Marketing Organisation—Manpower planning for sales and marketing functions.
2. Advertisement and Sales Promotion— For sales promotion, advertisement through media, television, radio, newspaper, journals, yellow pages, banners, hoardings, display signboards, participation in exhibitions, trade fairs sponsoring different events of regional, national or international importance and the expenditure towards these exercises occupy an important portion of the marketing budget.
3. Distribution Plan—Cost of physical distribution of the products through the distribution channel from the place of manufacture to the place of ultimate consumption through different intermediaries and through various modes of transportation is also needed to be taken into consideration. Cost of packing, forwarding, dispatching, trade discounts, handling costs are related here.
4. Incentive Plan and Scheme —Monetary rewards to dealers, wholesalers, retailers and salesmen as a motivational factor.
5. After-Sales Service Arrangements—Warehousing products and equipment and related spare parts in different regions to render after-sales service to the customers and the expenditure thereof should also be taken into marketing budget.
6. Cost of holding any conference, marketing fair, providing free gifts to valuable customers, free samples, specimen, etc.



## 7. Expansion of market territory.

The significant areas relevant to a season product are:

- Government Policy – Rules and regulations of the state and central government relevant to the marketing of the seasonal products,
- Production plan and schedule, and inventory holding costs of the company,
- Accuracy of sales forecasting with actual sales in the particular season and with rebate in off season.
- Warehousing facilities available for the company.
- Financial arrangement to supplement working capital needs.

A final issue facing the marketing planner is to optimally allocate a given marketing budget to the various Target Markets (TM). The TMs could be different sales territories, customer groups, or other market segments. With a given marketing product, and mix, it may be possible to increase sales and profits by shifting funds among different markets. Most marketing managers allocate their marketing budget to the various TMs on the basis of some percentage of actual or expected sales.

Budgetary control in marketing requires preparation of control statements at periodic intervals highlighting the budgeted figures, the actual figures achieved and the difference, if any. The difference, if any, need be analysed and investigated to find out the reason behind any such variance. The position is to be reviewed for taking necessary remedial measures which is an important part of budgetary control.

In marketing, the market share, value of sales, sales expenditure, revenue realisation and the profits are the most essential aspects to be controlled through the device of budgetary control. Budgetary control appraises and creates awareness about the costs and profits associated with each product, market, and territory and customer group. It helps in allocation of resources and marketing efforts in financial terms to each individual product, advertisement, sales promotion, individual sales and marketing function and individual marketing territory. The most commonly used tools and techniques of budgetary control include the following:

### **Ratio Analysis:**

- (i) Return on Investment (ROI) (or ratio of net profit to capital investment),
- (ii) Net profit to sales ratio, (or ratio of net profit to net worth),
- (iii) Sales to capital investment ratio,
- (iv) Gross profit to sales ratio,
- (v) Turnover to working capital ratio,
- (vi) Inventory to turnover ratio,
- (vii) Turnover to distribution expenses ratio,
- (viii) Turnover to sales promotion expenditure ratio,
- (ix) Turnover to bad-debt ratio.



The chief of marketing should act as marketing controller and must collect all relevant facts, figures and data through the marketing information system. The marketing chief should distinguish the controllable and uncontrollable expenses and variables and the levels at which the control should be exercised. Finally, the marketing chief and the appropriate authority will have to exercise their judgement as to the budgetary control functions.

### **Evaluation and Control of Sales Activities:**

Evaluation of sales activities is an essential exercise to ascertain the success or failure of the sales and market strategy, comparison of the target setting with the actual volume of sales and thereby to find out any performance gap or over-performance. In order to ensure that the sales targets are achieved, evaluation and control of sales activities both on an ongoing basis as well as at fixed intervals is a must. By comparing the actual sales results with the target set and analysing the causes of any difference between the two, sales control assists the head of sales management to appraise and modify sales strategies.

- To take necessary remedial action plan
- To review and revise to sales strategy and policy
- To increase sales and try to increase market share
- To establish image and goodwill in the market
- To increase sales profitability to achieve the overall objectives of the organisation

Sales reports from field sales personnel serve the useful purpose of evaluation of sales activities. The sales executives and the sales manager can use field sales reports to evaluate, analyse and measure sales performance against set targets to assess the standard of performance, as well as success or failure in achieving targets. Further evaluation is also necessary to assess overall sales expenses vis-à-vis the sales budget, expenses towards salesmen, advertising, and to control the sales budget.

A sales control system can be introduced by a company by instituting the following steps:

- Setting detailed objectives of sales
- Establishing standards for appraising performance
- Gathering information on actual sales activities and results
- Comparison of actual results with established standards
- Taking remedial actions.

The most commonly used methods of sales control are:

- (i) Sales analysis
- (ii) Marketing cost analysis
- (iii) Sales management audit

**Sales Analysis** It involves comprehensive studies and detailed evaluation of volume of sales by territory, skill, efficiency and performance of sales personnel, customer's needs and satisfaction,



product line and sales trend. If some technique such as the ABC analysis is conducted as in selective inventory control for materials inventory management, it is normally found that about 80 per cent of the orders, customers, territories or products account for only 20 per cent of the sales or profit. On the other hand, 20 per cent of the selling units contribute 80 per cent of the sales volume or profit. So, such an analysis helps in gaining meaningful insights into the company's sales and in exercising necessary control.

**Marketing Cost Analysis:** It is a fact-finding analysis to find out the costs to sales volume and the resultant profitability.

**Sales Management Audit:** It is a periodic, comprehensive, systematic and independent audit of the sales policy, objectives, strategies, organisation and procedures followed. Sales control helps in ensuring that the sales goals are systematically set in line with other goals of the organisation, and therefore, achieved efficiently. Sales managers use both formal and informal control networks in exercising sales control. The most important aspects of the sales control are:

1. Sales objectives, targets and goals,
2. Sales budget,
3. Sales reports,
4. Travel plan and town reports,
5. Supervision, monitoring and coordination of sales activities of the salesmen in the field,
6. Feedback from the agents/wholesalers/dealers/retailers,
7. Periodic inspection and studies of warehouses/depots,
8. Sales conference,
9. Sales expenditure reports,
10. Quantification of the total volume of sales, measurement and comparison with the target fixed,
11. Investigating the reason for deviation, if any, in the volume of sales or sales expenditure,
12. Contingency action plan as remedial measure to confirm performance and progress as per target,
13. Budgetary control to confirm sales expenditure as per sales budget.

Sales coordination, perpetual progress review and performance monitoring are simultaneous exercises for effective sales control. An efficient sales manager is to provide proper guidance and counselling to motivate the sales force and coordinate the different activities and transactions of the selling efforts in one common direction with a common objective. The Sales Managers are also to coordinate all aspects of sales activities with other tasks and activities of other functional disciplines of the organisation such as finance, R&D, production, quality control, public relations, materials and HRD with an integrated approach synchronising sales objectives with overall objectives of the organisation to achieve.



## Sales Promotion and Advertisement:

### Promotion and Communication:

Promotion and communication form an important part of the marketing mix. Many new consumer products fail not because they are weak but because they are not carefully positioned in the consumer's mind. Modern marketing demands that not only will the products be developed and manufactured but they should be backed up by proper promotion throughout communication with customers. To communicate effectively one needs advertising, sales promotion programmes and also publicity and public relations to develop a sound corporate image.

Marketing communications can be defined as a set of messages directed to specific target markets through multiple channels with the intention of eliciting a favourable response from the market towards the company's total product offering, and at the same time, providing for market feedback for improving and modifying the company's total product offering.

### Advertising:

Advertising is a major tool to direct persuasive communication to target buyers and public. It consists of 'non-personal forms of communication conducted through paid media under clean sponsorship'. Advertising is undertaken with the aim of improving on sales and profit. Advertising, however, is rarely able to create sales by itself; whether the customer finally buys also depends on the product, the price, its packaging, personal selling, financing and other aspects of the marketing process. Advertising only enhances the potential buyer's responses to the organisation and its offerings. It seeks to do this by providing information, by channelising desire and by supplying reasons of preferring a particular offer.

The following comprise the main functions of advertising:

- Decide the advertising objectives to be accomplished.
- Determine the target audience at whom the message is to be directed.
- Decide the advertising budget.
- Select the actual advertisement and present its effectiveness.
- Select the media.
- Coordinate the advertising effort with the rest of the promotional programmes.

### Sales Promotion and Publicity:

Sales promotion consists a wide variety of promotional tools, basically of short-term nature, to stimulate earlier or stronger market response. In using promotion a company has to establish the objectives, select the tools, develop a programme, pre-test, implement and control, and finally, evaluate the result.

The specific sales promotion objective derived from the more basic marketing objective set for a product, will vary with the type of target market. For consumers, objectives may include more usage and buying of larger size units, attracting competitor's brand users, etc. For retailers it



may involve encouraging off-season buying, stocking of related items, carrying new items and higher levels of inventory, and so on. For the sales force, objectives may include mobilising support for a new product, encouraging more prospective, stimulating off-season sales, etc.

Sales promotion tools have to be decided based on type of market, competitive conditions and cost effectiveness. For consumer promotion, free samples, savings coupons, reduced price or banded packs, premiums, trading coupons, etc. are the most common. Point of purchase displays and demonstration help increase the sales at the retail level. Trade promotion involves techniques used by manufacturers to secure the cooperation of wholesaler and retailers. Specialty cooperative advertising, free goods merchandising allowance, etc. fall in this category. Business conventions, trade business conventions and trade shows facilitate and stimulate direct communication and business enquiries between sellers and buyers of products and services. Contests, sweepstakes and games offer to the consumers, wholesalers or the sales-force, a chance to win some kind of a prize and thus tend to promote higher sales.

Developing a sales promotion programme includes deciding on the timing of the programme, duration of promotion, size of incentives, conditions for participation and the total budget. The promotion tools should preferably be pre-tested for appropriateness. Implementation plans have to be carefully established taking into account lead and sell-off times. Evaluation of results is a critical requirement and it is common to compare sales before, during and after a promotion. Evaluation may also be possible through consumer's survey and experiments.

Publicity is another major promotion tool. This involves securing editorial or news space as distinct from paid advertisements in all media read, viewed or heard by a company's consumers or prospects for the specific purpose of meeting the sales objectives. Publicity is used to promote brands, products, places, ideas, organisations and even nations. Nations have used publicity to attract more tourists, foreign investment, international support, etc. Organisations regularly use publicity to attract attention, or to counter a poor image.

Publicity is a part of a larger concept called public relations. The tools here include press relations, product publicity, corporate communication, lobbying and counselling. Depending on the objectives, a public relations person may have to create news or create events such as benefit evenings, dinners, fairs, contests, anniversary celebrations, and so on. Publicity has to be done very carefully as 'most stories are less than great ones' and may find it difficult to get past busy editors. Public relations men are often ex-journalists, for obvious reasons. Although it has great potential for building awareness and preferences in the marketplace, publicity is not a vastly utilised promotional tool.



## PART- B

# OPERATIONS MANAGEMENT STRATEGY

### Major Contents of Part B:

- Organisational Operations
- Production Strategy and Policy
- Logistics Strategy
- Human Resource Strategy and Policy
- Information Technology Strategy
- Research and Development Strategy
- Supply Strategy
- Materials Strategy
- Materials Requirement Planning (MRP)
- Capital Assets Strategy
- Distribution Strategy
- Enterprise Resource Panning (ERP)

### Essentials of Organisational Operations:

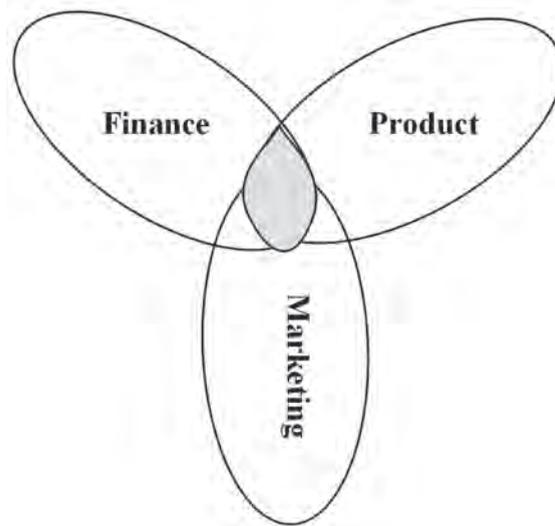
The operations function is performed by members of an organisation who produce the goods or provide the services that it offers to the public. The operations function, also called the production function, is one of three primary functions within a business, the other two being finance and marketing. In a typical business, however, the operations function employs the greater number of people and uses the greatest portion of the firm's controllable assets. Clearly, operations are a very important function, and one that certainly merits detailed study. The purpose is to discuss the various activities within the operations function and to explore how these activities can affect strategic management.

The operations function is only one part of a larger system—the entire organisation. It is interrelated with other functions in the organisation, so its plans and actions must mesh across functions for the total organisation to achieve its full potential. Before we discuss the operations function in greater detail, let us briefly review the other business functions—marketing and finance—as well as some secondary or supporting functions.

The operations function is sometimes called the production function, or the production and operations function. In the past, the term production sometimes connoted only manufacturing of tangible items; later the term operations was added, or substituted, to include nonmanufacturing

operations. Today the term production often has a broader meaning, referring to the production of goods or of services. Our earlier definition stated that the operations function is responsible for producing goods or providing services. The terms production, operations, and production and operations all refer to the function in either manufacturing or nonmanufacturing settings.

Manufacturing operations perform some physical or chemical processes such as sawing, sewing, machining, welding, grinding, blending, or refining to convert some tangible raw materials into tangible products. All other operations that do not actually make goods can be called nonmanufacturing or service operations. Customers deal with some of these nonmanufacturing companies to obtain purely intangible services such as advice or instruction; they may seek help in completing tax forms, for example.



**Figure: Critical Functions within Organisations**

Customers deal with other nonmanufacturing companies, such as wholesalers or retailers, to obtain goods, but these companies do not make the goods. These companies primarily serve their customers by transporting, packaging, storing, and the like, rather than by performing manufacturing processes. Thus, our major criterion for classifying operations depends on whether these operations manufacture goods or provide some type of service operation, even though they may provide tangible goods or some less tangible service to customers.

Providing a Product or Service when viewed at a general or conceptual level, all types of production operations have some common characteristics. The most obvious common ground is the system's purpose or function; the production system creates the goods or services offered by the organisation. The production system must transform some set of inputs into a set of outputs. All production systems share this element, illustrated schematically in the next Figure. The types of inputs, transformations, and outputs vary among operations.

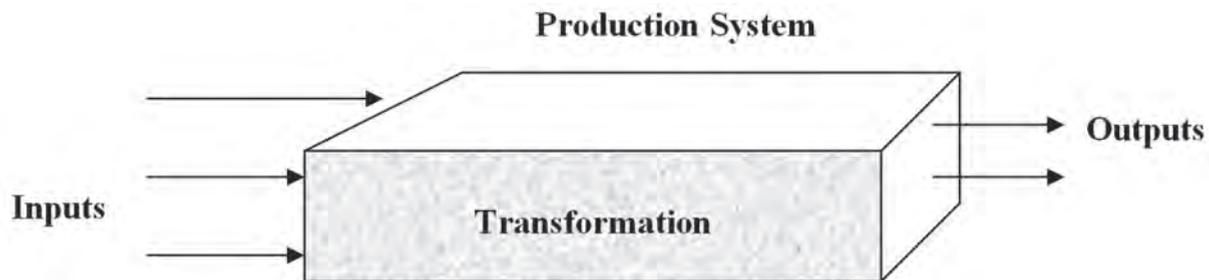
Manufacturing operations transform or convert such inputs as raw materials, labour skills, management skills, capital, and sales revenue into some product, which the organisation then sells. Other outputs are wages that flow into the economy, environmental effects, social influences, and other, even less obvious factors. The production system is a part of a larger



system—the company. The company is a part of a larger system—the community. As the system boundaries expand, it becomes more difficult to determine all of the inputs, outputs, and transformations.

Service operations also transform a set of inputs into a set of outputs. A restaurant uses such inputs as meat, potatoes, lettuce, the chef's skills, server's skills and many others. Some of the transformation processes involve storing supplies, blending ingredients into desirable combinations, and altering the form of the inputs by cooking, freezing, heating, and transporting them to the proper tables at the proper times. Less tangible operations involve providing a pleasant atmosphere, perhaps even including entertainment. The organisation hopes that its outputs include satisfied patrons. Other outputs include wages and purchase payments sent into the economy and refuse sent into the refuse collection system (which is yet another service system). Educational institutions use such inputs as books, students, and instructional skills to produce knowledgeable and skilled individuals as output. Hospitals use scientific equipment, professional skills, and tender loving care to transform sick people into well ones. Repair shops use repair parts, equipment, and worker skills to transform malfunctioning inputs into properly functioning outputs. All types of operations, then, transform inputs into outputs.

When the output is a tangible product, the transformations performed by the operations function are intended to increase the utility of the inputs by changing either the physical form of the inputs or the time or place at which the outputs are available.



Operations that change the physical form of the input include factories, landscapers, restaurants, upholstery shops, ice cream shops, and laundries. Some operations provide access to special skills or improve convenience as part of their services to customers. Operations such as wholesalers, retailers, transporters, and the postal system provide materials-handling operations to change the places at which their outputs are available. Banks, public warehouses, and cold-storage plants for food or fur storage perform inventory functions to make outputs available at different times. Even though the inputs, transformations, and outputs may vary, the general characteristic of transforming inputs into more usable outputs holds true for all operations.

The production facilities and methods that a manufacturing company uses are sometimes referred to as its production system. A company often devises a production system to match the way it conducts its business. More specifically, this system's design is related to the stage at which the company plans to hold inventory in order to serve its customers more quickly than they could purchase all of the materials and convert them into the final product themselves. At the time a customer's order is received, the firm might hold the items to fill that order (1) as finished goods, (2) as standard modules waiting to be assembled, or (3) as basic inputs



without any prior processing. The terms presented in the following paragraph characterise the degree of processing that is done after the customer's order is received. Some companies are make-to-stock producers that complete products and place them in stock prior to receipt of the customer's order. The end item is shipped from finished-goods inventory after receipt of a customer order. In contrast, a make-to-order producer completes the end item after receipt of the customer's order. For a unique, custom-designed item, the customer will probably have to wait for the manufacturer to purchase many of the materials and perform the production work because the producer cannot anticipate what each customer might want and have the necessary raw materials and components on hand to shorten the production lead time. If it uses some components or materials frequently, however, the producer may keep some of them in stock—particularly if the lead time to purchase or produce these items is long. The Skills Module discusses such a balancing act by a manufacturer of outdoor apparel. When a company produces standard-design, optional modules ahead of time and assembles a particular combination of these modules after the customer orders, the business is said to be an assemble-to-order producer. An example of an assemble-to-order producer is an automobile factory that, in response to a dealer's order, provides an automatic or manual transmission, air conditioner, sound system, interior options, and specific engine options as well as a specified body style and colour. The auto manufacturer would already have ordered many of the components or started them into production when the dealer placed the order. Otherwise the lead time to deliver the automobile would be much longer. With these terms in mind, we will now discuss the two major categories of production facilities and methods.

A continuous production system arranges equipment and work stations in a sequence according to the steps to convert the input raw materials into the desired component or assembly. The route of jobs is fixed, and the setup of the equipment seldom changes from one product to another. Materials flow relatively continuously during the production process. This type of production, sometimes called repetitive manufacturing, produces high volumes of discrete units, usually with a fixed sequence of material flow. Since the material flow path and processing steps are fixed this type of production frequently turns out standard make-to-stock products.

Examples are production lines or assembly lines for the production of radios, televisions, refrigerators, or other products that may be produced and stocked in perhaps a few standard models. The customer selects a particular standard model. Continuous production might turn out items that are made to order or assembled to order if the volume is sufficient to justify a fixed, special-purpose production system.

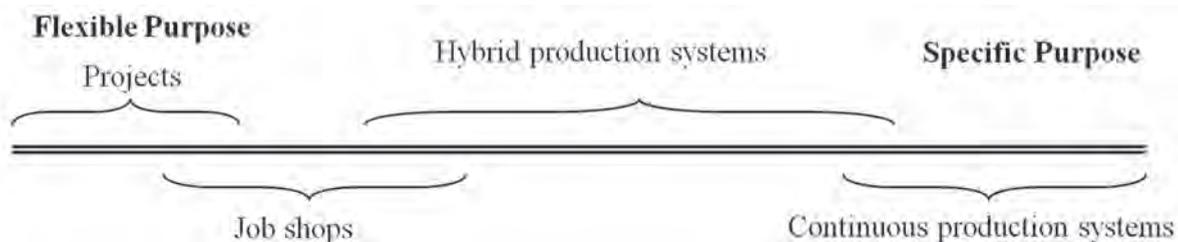
Some continuous production operations produce products that blend together in bulk rather than being sold as discrete units. Some products of this type of operation include petroleum products, flour, cement, and liquid chemicals. The industries that produce these types of products are sometimes called process industries, particularly if some physical or chemical reaction is used. (Chemical processing can also produce batches of more specialised material; this is sometimes called batch-process production.)

An intermittent production system or job shop differs greatly from the continuous system in that it is designed to provide much more flexibility. This type of production system groups and organises production equipment or work stations according to the functions or processes they perform. Different types of products flow in batches corresponding to individual orders. Each



batch or lot might follow a different route through the functional work centers, depending on the requirements of the type of product being made. Products could be made for stock or to order, but generally this type of production is associated with make-to-order businesses.

Continuous and intermittent production systems represent opposite ends of a continuum that measures the degree of specificity of a production system. At one end of the continuum are production facilities designed specifically to produce one particular standard item and optimised for the materials movement and production steps required to make that item. Near the other end of the continuum are job shops; they are not ideal for any single product, but are capable of producing wide varieties of items. Many production facilities embody features of both of these production approaches. They lie somewhere on the continuum between a job shop and a continuous production operation. Lying at the flexible end of the continuum is the low-volume type of operation often referred to as a project. Usually, projects have relatively long durations, and the same personnel often are assigned to a project for a significant part of this time. In the manufacturing category, projects include such items as ships, bridges, buildings, and large, specialised machines. Nonmanufacturing operations, or service operations, do not produce tangible outputs. Like manufacturing operations,



Nonmanufacturing operations can be subdivided according to the degree of standardisation of their outputs – that is, whether they are standard services or custom services – and/or the processes they perform. Some nonmanufacturing activities resemble projects because they involve the activities of teams of people over periods of time. A nonmanufacturing project might be a software package or a training program.

### Production Strategy and Policy:

Essentially speaking, the decision variables with respect to production of goods (manufacturing) and provision of services (e.g., transportation, retailing, etc.) are virtually the same. Manufacturing as well as service organisations alike have to decide on policies bearing on capacity, technology, purchasing, and soon. Retailers, for example, may decide to buy provisions in bulk and sell small packs made at their end; or, the packing may be done by wholesalers and made available to the retailers to sell. On the other hand, producers may decide to undertake only the assembly of parts procured from different manufacturers specialising in the production of particular parts; or buy some of the specialised parts and produce others for assembly. Thus, production or processing and purchasing functions may be interrelated in various ways.

The major issues in production policy may be said to include the following:

- (a) Should the production activity include making the components as well?



- (b) What should be the production capacity?
- (c) Choice of technology;
- (d) Maintenance/replacement of existing production facilities.

With another perspective, production strategy and policy may be said to involve decision-making in three inter-related areas, viz., production system, operations planning and control, as also research and development (R&D). Let us consider the implications of each for strategy and policy formulation.

The production system usually consists of several aspects of production activities including location of plant, its layout, manufacturing capacity, design of the product, technology (degree of mechanisation/automation), and the like. Also the system would naturally differ depending upon the extent of backward or forward vertical integration of production. If vertical backward integration has been adopted as a strategy, the output of final product would determine the components and raw materials to be produced. Again the factors affecting the production system would differ depending upon whether the business aims at enlarging the depth of product line on the basis of market demand and customer needs, or the focus is on technological updating.

The second area of significance in production strategy and policy making is operations planning and control. This is naturally concerned with efficient utilisation of resources and management of day-to-day tasks and operations. The relevant decision-making process would require policy guidelines relating to production planning as also inventory management ensuring supply of raw materials and spare parts, securing quality of output and maintenance of plant and equipment so as to minimise breakdown delays and making the process cost effective.

Today, many companies pursue the policy of getting operations carried out by decentralised ancillary units with centralisation of supplying all basic inputs as well as standardisation and testing of the output of ancillary units. Quality management is a significant part of operations control. Philips (India) Ltd. has its operations decentralised but there is strict monitoring of quality specifications of all its output of electrical goods and other products.

Supply chain management is another aspect of operations strategy and policy. This is generally referred to as logistics strategy. The strategy is aimed at ensuring the availability of materials of the right quality at the right price, right place and right time. The decisions involve identifying the sources of components and raw materials, or locations at which supplies should be available, mode of transport to be used, nature of facilities available for distribution, and the material handling equipments needed for the purpose of delivery.

The benefits of planning and managing the supply chain efficiently may be derived by way of cost savings in supply, minimising inventory holding costs, and more effective delivery as per time schedule leading to customer satisfaction and competitive advantage.

There are seven broad aspects to production strategy:

- (a) Selecting the level of production capacity.
- (b) Location of the plant. Factors influencing the location of plants will be nearness of transport, access to supplies, available labour and skills, and the availability of government grants and allowances. Scale economies may come into this decision, since it may minimise



- production costs to have one large plant, but marketing constraints might dictate that small plants should be established close to the markets.
- (c) Timing of investment in a new plant. Investment is expensive, and fraught with the problems of judging capacity accurately, the risk of competitors using more modern plant, the risk of changes in demand and the risk of overcapacity.
  - (d) Convert or build new? It may be better to convert an existing plant so as to be capable of producing more instead of building a new plant. This course of action would mean considerable downtime during the conversion process whereas going for a new plant on a new site may prove cheaper and more efficient.
  - (e) Make or buy. The strategy decision here is whether or not a company is well advised to tie up funds in manufacturing when it could buy from external suppliers instead and use the resources and funds that this would release in better ways, perhaps by investing in more effective marketing.
  - (f) The problem of flexibility. In the drive for greater mechanisation, and a corresponding reduction in the labour force, there is a loss of flexibility as more fixed investments are committed to long term production. Ackoff suggests that decisions should be taken about how much flexibility ought to be retained.
  - (g) Headcount levels required and whether or not these levels will need to change or the mix of labour skills will need to change. In traditional manufacturing, this has frequent; meant shedding labour with increasing mechanisation, whereas in retailing it has meant retraining. Here, a problem may be the willingness of employees to retrain or learn different skills.

Production strategy usually receives little attention while discussing corporate planning because it is taken into account while deliberating on marketing strategy. Undoubtedly, marketing strategy provides the basis for production planning. However, an organisation cannot plan its manufacturing process purely by prognosticating and visualising its market requirements. It must plan the location of its plant, layouts of equipment, plant, warehouses and related services, production scheduling, capacity utilisation, material handling and distribution.

### **Capacity Planning:**

One of the aspects of manufacturing strategy is planning production capacity, and matching capacity with demand.

Three levels of production capacity are:

- (a) Demand matching which attempts to match demand with production runs for the same quantity. This strategy may involve high-cost short production runs, but this is arguably a feature of just-in-time inventory control systems.
- (b) Operation smoothing, which gears production to average demand, but requires the holding of considerable levels of finished goods inventory when demand is seasonally low. This may not be possible with perishable goods or fashion products, and certainly not with services.



(c) Subcontracting i.e. producing at a minimum level, and buying in the remainder.

If there is an expected growth in sales over the planning period, plans should be made to increase capacity using methods such as the following:

- Obtaining more factory space, equipment and employees.
- Planning to introduce high-volume labour-saving equipment in the existing factory space.
- Planning to sub-contract some production work to outside suppliers.
- Whenever there is an addition to capacity, there is likely to be a period of time during which actual demand is less than the new capacity, and so there are idle resources.

If a surplus in capacity is expected, planners will have the task of suggesting how the unwanted capacity should be got rid of. Alternative strategies would be as follows.

- (a) Reducing capacity at each manufacturing plant by making employees redundant and selling off plant and equipment. A target of reducing the labour force by, say, 10% pa. for four years, might be set.
- (b) Selling off unwanted capacity to another company, or to a management buyout.

Capacity decisions can be painful ones, particularly in declining industries. Coal, steel, shipbuilding and the railways have all been faced with excess capacity for long periods since, 1945 to the present day. Capacity planning should be aimed at providing capital equipment that is sufficient but not excessive, so as to retain profitability and competitiveness. The selection of one of the capacity-reducing strategies would have regard to the following:

- (a) Costs and savings; the potential sales price of unwanted factories or plants,
- (b) Employee welfare.
- (c) The possibility of strike action against redundancies and closures.
- (d) The threat of competition in the case of a sell-off.

### **Capital Rationing and Capacity Planning:**

Capital rationing means not having enough capital to finance all the investments which are competing for funds and so the available capital must be rationed out in a suitable manner to make the best use of what there is. The process of capital rationing is therefore to set priorities about where investments should be made, and theoretically, optimise cash flow by giving priority for capital to those projects which produce the maximum cash flow. Lyneis suggests that the customer order rate should determine investment decisions about production capacity, and that eventually production capacity will move into equilibrium with orders.

A likely consequence of this 'reticent' financial planning, in a growth industry, would be a loss of market share due to an inability to fulfill orders. Growth is most rapid at times when competitors enter the market, and the ability to deliver goods when required is a vital factor in holding off competition and retaining a high standing in the market.



### **Make or Buy:**

The decision about whether to produce parts and components in-house, or to sub-contract work to external suppliers, is referred to as the 'make-or-buy decision'. Making products in-house is often cheaper than buying them, because an external supplier will charge a price which must cover his fixed costs and give him a profit, but the direct comparison of in-house costs with suppliers' prices is only one factor in the make-or-buy equation. Other issues to consider are the following:

- (a) When a company makes products in-house it is tying up resources - management and labour, working capital, fixed assets, space in buildings etc - which could be used for other more profitable purposes. There is an opportunity cost which might make in-house production more costly than buying from outside - e.g. in terms of lost opportunities for expansion into other product-market areas.
- (b) If a company cannot produce all the output it needs in-house, it will be forced to use external suppliers to some extent. If it must do so, it will have to try to ensure that the sources of supply remain open, and that supply is never in danger of 'drying up'. This might oblige the company to offer a supply contract to a supplier which guarantees a minimum supply quantity over a period of time, so as to:
  - (i) help the supplier to make the profits he needs to stay in business; and
  - (ii) receive 'favoured customer' treatment from the supplier; and perhaps
  - (iii) persuade the supplier to make modifications to his own production methods so as to meet the company's requirements more exactly.
- (c) In-house production should be easier to control in terms of product quality and the reliability of delivery, but if a company tries to do too much itself (e.g. forces employees to work overtime, introduces shift working, or imposes unrealistic production schedules) it might then suffer from employee unrest, and industrial relations difficulties.
- (d) External suppliers need to be reliable in terms of product quality and reliability of delivery times, and alternative sources of supply should be sought, in case one supplier becomes too unreliable or too expensive.

Manufacturing ties up large quantities of capital, and so if a company's strengths lie in marketing or development, then it might be advisable to concentrate on these areas and to subcontract the production work to other organisations.

### **Need for a Production Strategy:**

The key to successful survival of an enterprise as an independent unit is how efficiently production activity is managed. The two major factors that contribute to business failures are obsolescence of the product line and excessive production costs. These factors themselves have been the outcome of ineffective production planning.

Production strategy plays crucial role in shaping the ultimate success of a firm. Being based on objective analysis of external environmental forces and corporate strengths and weaknesses, it enables an organisation to make optimal decisions regarding product, production capacity, and



plant location, choice of machine and equipment and maintenance of existing facilities. Constant review of manufacturing plan aids in maintaining proper balance of capital investment in plant, equipment and inventory, personnel commitment, efficient operation of the production system by bringing in flexibility and versatility in response to schedule fluctuations, product mix and variations in raw material and quality control, and ensures effective material handling and planning of facilities.

Within the corporate structure, production strategy helps in maintaining full co-ordination with marketing and engineering functions to formulate plans to improve products and services. It calls upon management to keep in constant touch with finance and personnel to achieve the optimal use of assets, cost control, recruitment of suitable production personnel and management of labour disputes and negotiations.

### **Formulating Production Strategy:**

The following steps are involved in the formulation of production strategy—

- (i) Study the overall corporate plan and define the objectives.
- (ii) Analyse the present production operations and the present and future environment.
- (iii) Review sales- forecast and marketing.
- (iv) Make strategic decisions for production.

**1. Study of Corporate Plan and Statement of Objectives:** As in other operating areas, production planning begins with corporate objectives and planning premises. Examination of overall corporate planning not only provides overall directions for manufacturing but also answers questions about overall economic, industrial, market and company factors which will limit and otherwise affect the production planning. Within the framework of these overall planning factors, the planner establishes production objectives and definitions of the general product and process areas in which production operations should concentrate.

**2. Analysis of the Present Production Operations and the Environmental Forces:** The production manager should analyse the current manufacturing operations and the present and future environmental trends to determine the company's manufacturing strengths and weaknesses and to isolate environmental factors such as the manpower supply and new process and equipment developments, which significantly affect manufacturing operations. During this phase of manufacturing planning, the planner examines the premises or factors that affect the manufacturing operations specifically.

A study of plant location should be made to assess the effectiveness of present location with respect to key supplies and channels of distribution, and analyse the economies of plant location in terms of labour costs and reservoir of labour skills, both short-term and long-term. Percentage of plant capacity being currently used effectively should also be studied.

The existing condition of the machinery should be studied and its quality and efficiency should be compared with others in the same field including overseas competitors. It must



also be ascertained as to how many new equipment developments within the industry have been used by the company such as use of computers for scheduling, automated warehouses, miniaturisation, programmed equipment, etc. Current schedule for replacement of machinery and cost of such replacement also need examination.

Regarding maintenance, production manager should check availability of replacement parts. He should also see if the company has work standards to measure productivity.

In production scheduling, information regarding down time on machinery, accuracy of scheduling, history of production delays and reasons for the delays, method changes over the past few years and future trends, etc. should be gathered and analysed.

Regarding materials aspect of production it is very necessary to analyse the purchasing requirements, rate of inventory turnover, production delays due to out of stock materials, condition of the material handling equipment, adequacy of existing facilities of the material handling equipment, adequacy of existing facilities for storing and warehousing materials and other similar matters.

3. **Review of Sales Forecast and Marketing Mix:** Since planning in other areas affects manufacturing plans, the planner should examine the plans in these areas. Sales goals are the basis upon which specific operating plans for manufacturing are built. Hopefully, the manufacturing manager will have participated in the development of these goals so that the sales goals can be reconciled with operations limitations. Once settled manufacturing plans can be developed to meet sales goals. The impact of marketing mix, research and development and new product administration on manufacturing are also examined.
4. **Making Strategic Decisions:** Keeping in mind the overall corporate business mix, present production operations, environmental forces, sales forecast and marketing mix, the production manager has to decide about the extent of manufacturing activity, choice of manufacturing process, capacity machines and equipment to be used, and physical facilities.
  - (a) **Extent of Production Activity:** The first vital decision which a production manager has to make, particularly in consultation with marketing and finance managers, is regarding the extent of manufacturing activity the firm will carry out. There is usually a great deal of choice in the extent of commitment to production, i.e., of vertical integration. At one end of the spectrum are all the items used in production including standard parts, small special components and major components that can be manufactured and completely assembled. At the other end are the finished products that can be bought and the company's name attached. Nature of the manufacturing operation dictates, to a certain extent, the area where the optimum is likely to be. Even then, there is often a considerable range of variation.

A number of factors influence managerial decision regarding extent of manufacturing activity. A firm will be tempted to manufacture raw materials and components for the products to be sold along with assembling parts, if it finds that this will ensure supplies in accordance with their required quality, quantity and timely availability.

This temptation will be further strengthened when costs of producing raw materials and components are found to be less than the price at which suppliers will supply



these materials. Uncertainty regarding ready availability of supplies further suggests that the firm should have a captive source of supply of vital raw materials and ingredients.

Size of investment involved in developing production facilities also influences the extent of the firm's production activity. Where the investment involved is large, introducing new products or changing the product design with consequential charges in the plant facilities are likely to be too costly to bear. In such situations it will be desirable for the firm to procure its materials from outside sources because that provides greater flexibility and adjustment to changes in needs.

Financial strength of the firm plays a significant role in deciding the extent of the production activity of the firm. Thus, a firm with a strong financial position is better placed in integrating manufacturing and processing of components and products than the one whose financial position is weak.

Similarly, availability of managerial expertise in the firm decides the range of manufacturing activity. Where a firm has executives with specialised skill and competence in a particular line of activity, it must recruit new executives with equal efficiency. It will, therefore, be prudent on the part of the production manager to consult the top management if the firm can afford the cost of new executives. The finance manager may also be involved in working out the cost-benefit implications of the decision.

- (b) **Choice of Manufacturing Process:** Selection of a suitable process in advance of the actual production of goods is another strategic decision that considerably influences the success of an industrial enterprise. The design of the manufacturing process is not restricted to new concerns or new products. Existing enterprises have also to review their operations in the light of the competition in order to increase production at lower costs.

Production process refers to the design of a series of operations to transform inputs into desired outputs. Process planning involves the following steps:

1. A-careful review of the product design and specifications to make sure that economic manufacture is feasible.
2. Determination of the methods of manufacture that will result in the optimum manufacturing cost.
3. Selection or development and procurement of all machines, tools, and other equipment required for the manufacture of the product at the required quality and rate of production.
4. Layout of the production area and auxiliary spaces and installation of the manufacturing facilities.
5. Planning for and establishing the necessary control of materials, machines and manpower to ensure the effective utilisation of the manufacturing facilities for economical production of the product.



Thus, the process design activity comprises all such activities as are necessary to arrange for the manufacture of the product by the most economical means and in compliance with all safety regulations.

- (c) **Capacity Decisions:** While considering a new plant design or the redesign or expansion of an existing system, a high level decision regarding the production capacity is called for. In order to determine future capacity of the plant adequate consideration should be given to certain factors such as sales forecasts of physical volume, policy decisions on what will be purchased instead of made, engineering estimates of machine productivity and production plans on how equipment will be used. Upon this must be super imposed central management policies regarding desired capacity including policies regarding provisions for peak versus normal requirements, backward taper of capacity provision for growth and balance of facilities.

One of the most vital decisions which have to be made regarding production capacity is whether the company should build so much capacity to satisfy all demands during peak periods or whether it should maintain a smaller capacity and hope that failure to render service during requirements will not have unbearable consequences. Generally, companies providing utilities have a policy of building capacity to cope with peak demands (during hot summer days). But the investment made for peak demands is tremendous.

In view of burgeoning amount of investment the moot question that arises is whether capacity installed in order to meet the maximum expected demand should be maintained at all times. It may not be disadvantageous to maintain the excess capacity throughout the year if one is confident that excess capacity can be utilised by expanding exports or by accumulating stocks if the duration of the surplus capacity is expected to be limited.

There are some organisations who prefer to build smaller capacity to take care of normal requirements and meet peak demands by way of imports or subcontracting – some organisations employ measures such as off-peak discounts, mail early campaign, etc. to induce customers to avoid peak periods.

Another way of meeting high peak demands is to switch over to two shifts from the single shift. Before making a final decision in this direction, cost-benefits analysis must be undertaken. With doubling of shifts, investment costs are not halved because increments of capacity are not equally expensive. Many other costs are also involved. Wage premiums say 10 to 15 per cent, are generally given for second shifts. Multiple shifts also increase supervision costs. An analysis of building and equipment costs resulting from doubled shifts is necessary to determine the total additional cost. Additional cost should be matched with additional benefits. Where benefit exceeds costs it will be in the interest of the organisations to run double shifts to cope with peak demands.

Adequate provision for coping with growth requirements of the organisation must be made while determining production capacity. For this, it is necessary for the top management to decide how much growth is expected and the extent to which investment will be made in anticipation of growth. This decision will have to be taken very carefully otherwise it may result in too much or too little capacity in serious consequences.

- (d) **Choosing Machines and Equipment:** Another strategic decision to be made by a production



manager is what type of equipments the organisation will require for production purposes, how much it will cost, what will be its operating cost and what services it will render to the organisation and for how long.

Choice of equipment for making a particular product essentially depends on the basic manufacturing process. The decision maker must, therefore, familiarise himself with the production process to be adopted.

Another consideration in the choice of new equipment for a plant is the type and degree of operating skill required and presently available skills within the organisation. Other factors worth consideration are the ease with which the equipment, can be operated and the safety features of the equipment.

While deciding about the number of each type of machines needed to produce a product, producing engineer must take into account the quality of product to be made within any given period of time, number of working hours in the plant during this period, the various production rates on the operations to be performed, set-up time for each operation, number of set-ups per machine for the time period, the operating efficiency of the plant and finally the scrap loss during each operation. To find the requirements for any particular piece of equipment in a process, the total number of hours per month (or other time period) that the equipment is required to produce the desired quantity is divided by the total number of hours per month that the equipment is available, taking plant efficiency into consideration. Then the total requirements for all operations to be performed on each unit of equipment are considered in terms of the number of set-ups involved and the time required for each set-up.

In a product-line layout of equipment, where each machine is set up to perform only one operation, the set-up time can be neglected, but the problem of line balancing becomes important. In the process-type layout, where machines are commonly used on several different parts and/or operations, set up and scheduling time losses must be carefully considered. Balancing is not a serious problem in such case.

For balancing the capacities of various machines in a product-line layout, it may be desirable to buy more than enough machines if the equipment is not very expensive and if this will avoid possible shut-down or restriction of the entire manufacturing line. Where the equipment is quite costly, it may be necessary to provide only the minimum number of machines and rely upon overtime or extra-shifts to meet production requirements when breakdowns occur.

- (e) **Equipment Investment:** Acquisition of equipment involves capital expenditure which will have long-term effects on the financial position of the company. Hence, before taking a final decision regarding investment in a machine, detailed analysis of such investment in terms of cost-benefits must be made and its desirability and worthwhile ness should be evaluated with the help of internal rate of return or present value method.

The decision to replace the existing machine is equally important to the enterprise. In this regard the management has to decide when the replacement should be made and what is the best replacement policy which must be considered while making comparisons between an existing unit of equipment and its possible replacement. In order to make a



sound economic comparison, all the factors must be converted into cost considerations. Then, cost savings resulting from the proposed equipment must be related to incremental capital expenditure reducing the former in present value. The rate of return so obtained is compared with the cut-off rate to ascertain whether the replacement is economically viable.

Thus, clear-cut policy guidelines regarding methodology or computation of net investment outlay, incremental operating expenditure and income depreciation, obsolescence, salvage value etc. will help management in taking decisions regarding acquisition and/or replacement of machines.

- (f) **Physical Facilities Decisions:** Facilities strategy covers plans for location analysis and selection, design and specifications including layouts of equipment, plant, warehouses and related services specifying and providing for maintenance. Facilities planning deals with the separate but interrelated costs of material, supplies, manpower services and facilities. Its mission is to find ways to minimise the aggregate of such costs in making and distributing the products at the proper time.

**Plant Location:** Plant location is essentially an investment decision having long-term significance and implied economic effects. A good decision plays off; a bad decision can cause grim financial difficulties. Once a plant is acquired, it is a permanent site that cannot readily be sold. The management may also contemplate relocation of the plant when business expansion and advanced technology require additional facilities to serve new market areas, to produce new products, or simply to replace the old, obsolete plants to increase the company's production capacity.

Before a location for a plant is sought, long range forecasts should be made anticipating the future needs of the company. These should be based on the company's expansion policy, the anticipated diversification of products, the trends in market demand, geographical distribution, material and labour supply, and any other foreseeable influences. Thus, plant location decisions require intensive study of economic and socio-political circumstances. The accuracy of forecasting is essential regarding rising demand and anticipated sales increases. Miscalculation in this respect may post serious problems before the company can occupy the new facilities once built and expand the new facilities subsequently due to land and environmental constraints.

The selection of an appropriate plant site calls for location study of the region in which the factory is to be situated, the community in which it should be placed and finally, the exact site in the city or countryside.

**Plant Building:** Once the company has chosen the plant site, due consideration must be given to providing physical facilities. A company requiring extensive space will always construct new buildings.

Oil planning a building for the manufacturing facilities, a number of factors will have to be kept in mind such as nature of the manufacturing process, plant layout and space requirements, lighting, heading, ventilating, air-conditioning, service facilities and future expansion.

**Plant Layout:** Plant layout involves the arrangement and location of production machinery, work centres and auxiliary facilities and activities (inspection, handling of material storage and shipping) for the purpose of achieving efficiency in manufacturing products or supplying



consumer services. Plant layout should co-ordinate use of material, men and machines and achieve the following objectives:

- Facilitate the manufacturing process,
- Minimise materials handling,
- Maintain flexibility of arrangement and operation,
- Maintain high turnover of work-in-process,
- Hold down investment in equipment,
- Make economical use of building cube,
- Promote effective utilisation of manpower,
- Promote for employee convenience, safety and comfort in doing the work.

In designing plant layout a number of factors such as nature of product, volume of production, quality, equipment, type of manufacture, building plant site personnel and materials handling plan should be kept in view.

**Maintenance of Equipment:** Maintenance of equipment is an important facility of planning consideration. It is intimately linked with replacement policies. Every manufacturing enterprise follows some maintenance routine in order to avoid unexpected breakdowns and thus minimise costs associated with machine breakdowns such as machine down time and possible loss of potential sales, idle direct and indirect labour, delays in other processes that may depend for material supply on the machine that is down, increased scrap, customer dissatisfaction from possible delays in deliveries and the actual cost of repairing the machine.

A number of strategies can be adopted for maintenance of machines and equipment. Two most important ones are carrying excess capacity and preventive maintenance.

In carrying excess capacity method an organisation carries stand-by capacity which is thrown into the breach if trouble occurs. This excess capacity can be whole machines or it can be major parts or components which ordinarily take time to obtain. Carrying excess capacity involves cost which must be compared with costs arising out of a slow-down or a shut-down of a whole series of dependent operations. Therefore, the decision in this regard is cost trade-offs.

The question that now arises is how much excess capacity should be carried by an organisation. This should be decided keeping in mind a fundamental principle that as the number of stand-bys increases, lost production costs decrease while holding costs for the stand-bys rise. The alternative providing the minimum total cost is preferred.

**Preventive Maintenance:** Preventive maintenance is based on the premise that good maintenance prevents breakdowns. Preventive maintenance means preventing break downs by replacing worn-out machines or their parts before their breakdown. It anticipates likely difficulties and does the expected needed repairs at a convenient time before the repairs are actually needed. Preventive maintenance depends upon the past knowledge that certain wearing parts will need replacement after a normal interval of use.

Another and quite different kind of preventive maintenance can better be called maintenance prevention. It is concerned with designing machines which will be both trouble-free and easily repaired.



The most strategic decision which a production manager has to make in this regard is to determine whether preventive maintenance is more expensive than repairing on call. This requires comparison of total costs involved in preventive maintenance with those in repairing. There are more elaborate models for special maintenance problems such as an inspection policy for equipment that can be restored to an operating condition and replacement and policy for equipment renewed after a certain length of service. However, such sophisticated analyses are appropriate when the investment involved is large or service reliability is critical.

A typical preventive maintenance strategy is more mundane than mathematical modelling. The guiding principle is that the time spent on preventive maintenance should be less than the time required for repairs, and the value imported to machines by preventive maintenance should exceed the programme cost.

### **Production Planning Process in Indian Organisations:**

Opinion survey of the 20 large sample organisations reveals that production planning process began with establishing production objectives and determining the general product and process areas. This was done within the framework of overall corporate objectives and strategy of the organisation. Product objectives set by the majority of the companies were augmenting productivity, product innovation, quality excellence, optimum utilisation of capacity and improving safety and saving energy.

Once the manufacturing objectives were established, the production managers of the organisations analysed the current manufacturing operations and future environmental trends to determine the company's manufacturing strengths and weaknesses and to discuss environmental factors such as the manpower supply and new process and equipment developments which significantly influenced production operations.

They also examined the current schedule of replacement of machinery and cost involved therein. Maintenance issue was also looked into to check availability of replacement parts. While studying production scheduling, information pertaining to down line on machinery, accuracy of scheduling, history of production delays and reasons for the delays, method changes over the past few years and future trends, etc. were gathered and analysed. As regards materials aspect of manufacturing, organisations contacted reported that they examined thoroughly, some critical aspects such as purchasing equipments, rate of inventory turnover, production delays due to out of stocks of materials, condition of the material handling equipment, adequacy of existing facilities for storing and warehousing materials.

The production managers of all the organisations participating in the study observed that strategic decisions with respect to extent of manufacturing activity, production scheduling, capacity' utilisation, quality of the product, availability of raw materials, plant layout, material handling, waste control, maintenance and inventory aspects were winnowed keeping in view corporate business mix, present manufacturing operations, environmental forces, sales forecast and marketing mix research and development and new product administration on manufacturing.

- 1. Components of Production Planning:** It emanates from the foregoing analysis that production department of the organisations performed various activities as a part of



production planning so as to achieve the objectives. However, the weightage given to each of these activities has differed from organisation to organisation. Most of the companies give highest priority to quality of production. While undertaking production planning exercise, product scheduling, capacity utilisation, plant layout, material handling and energy saving elements of production planning received the highest emphasis from over three-fourths of the companies. However, areas like procurements and utilisation of raw materials, inventory planning and maintenance received relatively less emphasis. The basic reason which the executives pointed out for greater focus on quality, capacity and material handling aspects of production planning process, was the strong belief of the top management, that these aspects would improve their competitive position in the market place. It was revealing to find during the course of discussions with the production executives that even within the production planning process, the immediate things attracted higher attention of the management than the equally important ones otherwise there seemed to be little justification for less emphasis on maintenance and inventory management as compared with capacity utilisation, quality control and material handling.

- 2. Production Scheduling:** The primary objectives of production scheduling, as noted during the course of opinion survey of the executives, were optimisation of machine utilisation, maximisation of production, minimisation of number of delayed jobs, minimisation of work-in-progress and also minimisation of the total cost of production. In view of the inconsistency of these objectives, product scheduling exercise was found to become a compromise on one criterion but later to make adjustments for other categories.

The organisations were found employing advanced techniques for scheduling purposes. In three-fourths of the companies, operations research techniques and computer models were used. Simulation was employed in one-fourth of the cases.

In product scheduling exercises, organisations reported that they were facing number of practical problems such as breakdown, power shortage, water shortage, seasonal fluctuations, and uncertainty in availability of raw materials, etc. To cope with these problems, three-fifths of the companies' prepared two schedules – long-term schedule for the whole year and a short-term schedule for quarters or months. One-fifth of the companies were found breaking down their annual production plan into monthly plans; the monthly production plan is varied according to seasonal fluctuations and maintenance schedules.

- 3. Capacity Utilisation:** Capacity utilisation aspect of manufacturing planning received high priority in majority of the cases. The major factor contributing to this high emphasis, as reported by the executives, was that high capacity utilisation had the benefits of lower overhead cost, improving efficiency of raw materials utilisation and quality of the product.
- 4. Quality Control:** Quality Control element of manufacturing planning, received highest priority in all the cases because of increased competitiveness resulting from liberalisation of economic policies leading to influx of transnationals in every segment of business who were known for World Class quality performance. Further, customers in the changed scenario became more demanding, choosing and unforgiving whose priority was to find the most cost-effective method of fulfilling their needs. Being fixated on the customers



forced the companies to constantly track their changing needs and expectations and focus utmost on quality.

So as to achieve quality objective, two-thirds of the organisations were reported to have adopted total quality management (TQM) whereby quality was embedded in business strategy so that every one in the organisation and its processes was influenced by total quality consideration. These organisations had already received ISO Certification for quality control.

Half of these companies (10) reported that for ensuring superb quality they had embarked on benchmarking process. In benchmarking, as stated by the responding executives, existing work and service methods of the enterprise were compared against the outstanding practices of the world to identify changes that would result in higher quality output. The process followed in this regard was identifying product or process to be benchmarked, choosing the benchmarking standard, collecting the information from various sources and analysing the same to find out the gaps both in quantity and quality terms. Most of the organisations opted for best-in-class.

So as to bridge the gap between the existing process and the benchmarked process, six companies adopted reengineering process and the remaining four went for modification in systems and procedures. The organisations opting for reengineering believed that quality product of world class was possible only with the fundamental redesigning of existing business processes. The process that was adopted by these organisations was drawing up a futuristic vision of what to achieve, deciding the activities where there was scope for addition of most value and whose dramatic improvement would deliver the greatest benefits to the organisation and its people and finding the facilitator who could help the management to manage the change. During course of discussions with the senior executives of the organisations, it was noted that focus in reengineering process was on linking people, process, strategy and technology.

Another revealing fact emerging out of the investigation was that the above six companies which opted for reengineering had empowered their executives to make decisions within one's area of operations without having to get approval from any one else and provided resources to execute the decisions.

In five cases the concept of quality circle was adopted wherein small voluntary work groups of employees were constituted to meet regularly to identify, analyse and solve work related problems and make recommendation to the management.

It was also interesting to find that over two-thirds of the companies were using statistical methods of quality control.

- 5. Efficiency of Materials Utilisation:** Three-fifths of the companies gave high priority to efficient utilisation of raw materials, whereas one-tenth of the organisations did not give much emphasis to it. High concern for efficient utilisation of raw materials was aimed at reducing cost of production. It was reported by the responding organisations that many times poor efficiency of materials use not only increased the cost of production but also increased the number of rejects and spoiled the quality of the product itself. In two public sector enterprises the problem of raw material utilisation was so serious that a separate



task force had to be constituted on full time basis to monitor the raw materials efficiency in their various plants.

- 6. Plant Layout and Material Handling:** Almost all companies gave high emphasis to the plant layout and material handling processes. These companies reported that proper layout helped in decreasing the cost by reducing the effort needed by workmen to carry out the task. Four companies reported that proper layout helped them to bring down the number of workmen.

In two cases, it was brought to our notice that proper layout reduced the quantum or frequency of handling movement between production processes.

Plant layout and material handling procedures were found complementing each other. It was noted during the course of the field study that effective material handling system helped in improving cash flows, reducing costs, etc. The major factor that influenced the material handling system was that the latter should help improve production performance by ensuring proper material flow and by reducing the number of hookups due to inadequacy of material and lower cost production.

Material handling system, as noted during our discussions with executives, differed from organisation to organisation. In two-fifths of the organisations material handling was largely done by contract labour.

- 7. Waste Control:** Waste Control as an element of Production Planning received overwhelming emphasis in the case of over two-thirds of the organisations. Companies according less weightage to this aspect were few and far between. During our survey it was found that there was tremendous scope for waste control in these companies but due to indifferent attitude of the management, the same could not receive serious attention.

The major areas of waste control which were emphasised by the companies were reducing wastage of raw material, utilities, water and rejected products. It was surprising to find that in about one-third of the companies participating in the study, wastage of raw materials constituted a very high proportion and these companies developed new products by using waste product through bringing about small modification in the process. In five cases, the thrust of waste control was water. These companies had effluent treatment plants where the used water was recovered and employed for varied purposes.

- 8. Maintenance Strategy:** Maintenance component of production planning has been receiving growing importance during the last three decades mainly because of pathbreaking technological advancement. The field survey revealed that the companies under sample study adopted three strategies of maintenance, viz., breakdown maintenance, productive maintenance and preventive maintenance. Breakdown strategy was adopted by more than 50 per cent of the companies. The reason for high dependence on this strategy was found to be lack of infrastructure and technical competence for the job. In the remaining companies, preventive maintenance as also productive maintenance strategies was followed. These organisations had a network of infrastructural services like maintenance engineering, management service, technical services, etc.

- 9. Inventory Planning:** It may be noted that majority of the companies had accorded given high and fair emphasis to inventory planning. The areas covered under inventory planning



were procurement planning, purchase policy, inspection of materials, storage system and inventory control. In one-third of the organisations, value analysis was also emphasised. However, inventory control received overriding importance in almost all the cases.

During the course of discussions with the executives, it was noted that vendor management received greater emphasis. 40 per cent of the companies had established special task forces in their material department for development of good suppliers. Just-in-time policy was reported to have been adopted by 20 per cent of the organisations. In other cases, purchase policy emphasised the reduction of lead time and cost purchases.

Among the techniques used by almost all the organisations for inventory control, Economic Order Quantity (EOQ) and ABC Techniques were found most popular.

It was revealing to note that the manufacturing companies were showing a distinct preference for outsourcing almost all the components they needed rather than manufacturing parts. The reasons attributed by the executives to this preference were that outsourcing components provided various benefits like lower investments, decentralised operations, speed, flexibilities and competitive quality.

Three companies reported that they had plans to reduce their in-home manufacturing to almost 40 per cent over the next 24 months.

**Logistic Strategies:** Logistics refers to the flow of supplies of raw materials and other ingredients of products into and through an organisation as also the disposal of wastes and scraps so as to ensure production processes continuing as per schedule. The process of management involved is known as supply chain management. The objective of logistics strategy is to ensure that materials and ingredients of the right quality and quantity are available at the right place and at the right price. Management of logistics strategy thus includes maintaining regular contact with the suppliers, intermediaries in the channel of distribution, and the transport operators concerned – roadways, railways and sea transport, if necessary.

Formulation and implementation of logistics strategy require management to take into account the sources of raw materials along with the location of manufacturing units, products and production schedules, mode of transport and costs thereof, scope of using material handling equipments, and the policy on inventory holding.

Managing logistics efficiently may yield several benefits contributing to saving costs and thus to profitability. Advantages of suppliers' reliability, scheduling delivery time appropriately, reduced inventory holding and cost savings arising out of routing transportation economically may also lead to customer satisfaction in terms of product quality, price and availability.

### **Information Technology Strategy:**

With the rapid development of microcomputer technology and information systems, we have now entered an era which is characterised by the following:

- (a) Automated processing of much, if not most, routine operational data.
- (b) Improved systems for storing and analysing data, and so the development of databases.
- (c) Improved communication systems.



- (d) Improved management information systems. For example, individual managers can use office microcomputers to develop fairly complex models (e.g. using spreadsheets) and carry out extensive sensitivity analysis and risk analysis.

Inevitably, the 'electronic office' should make organisations re-think the future structure of their offices - i.e. their management and administrative staff, and their information systems.

Michael J Earl (in Management strategies for information technology), lists nine reasons justifying the case for a strategy for information systems (IS) and information technology (IT). Information systems and information technology:

- (a) involve high costs,
- (b) are critical to the success of many organisations,
- (c) are now used as part of the commercial strategy as a weapon in the battle for competitive advantage,
- (d) are required by the economic context (from a macro-economic point of view as well as a microeconomic one as in item (c) above),
- (e) affect all levels of management,
- (f) may mean a revolution in the way information is created, and presented to management,
- (g) involve many stakeholders, not just management, and not just within the organisation,
- (h) if necessity imply that technical issues are important,
- (i) require effective management as this can make a real difference to successful IT use.

### **IT is a high cost activity:**

- Many organisations invest large amounts of money in IT, but not always wisely. The importance is not how much is spent but how well the funds are spent. Until recently at least, IT expenditure has been growing fast.
- It is also estimated that most IT expenditure will be related to the leading technologies in end-user computing, and high performance niche areas (e.g. expert systems, computer integrated manufacturing), rather than on traditional data processing.
- Despite all the expenditure, there may be a lag before the new facilities are exploited to the full. The benefits of the IT expenditure might be delayed until the skills of users are available to produce them.

IS and IT are critical to the success of many organisations.

IT can be said to function in four different ways in an organisation.

- (a) As a support activity (e.g. providing ad hoc responses to queries) which is useful but not critical to organisational success.
- (b) As a factory activity — where information systems are crucial to current operations and their management but not at the heart of the company's strategic development.



- (c) As a turnaround activity in which IT is seen as crucial to a firm's business development, and is used to open up new opportunities (e.g. information technology acquired to enhance flexibility of marketing and production of consumer goods).
- (d) As a strategic activity, where without IT the firm could not function at all (e.g. many financial services companies depend on computers, telecommunications and databases, just like a manufacturing company depends on raw materials).

In developing a strategy a firm should assess how important IT actually is in the provision of products and services. In the financial sector, many products or services would be inconceivable without IT.

### **IT is a strategic weapon.**

IT can be used as a strategic weapon in the following ways:

- (a) IT is a potential supplier of competitive advantage to an organisation:
- (b) IT can be used to improve productivity and performance, although some studies have concluded that this must be enhanced with broader changes to the work environment. Computer aided design (CAD) and computer integrated manufacturing (CIM) are two examples.
- (c) IT can be used to alter the management and organisational structure of the business (e.g. electronic mail, telecommuting).
- (d) IT can be used to develop new businesses (e.g. Reuters created an electronic market place where subscribers could trade via Reuter terminals).

Some of the uses of IT in implementing the three generic strategies are outlined below.

- (a) Overall cost leadership. IT can reduce costs by:
  - reducing labour costs (e.g. production control systems, clerical work),
  - reducing manufacturing costs by efficient scheduling etc (e.g. computer integrated manufacturing, better monitoring of raw materials usage to reduce wastage).
- (b) Product differentiation. Information technology can be used to:
  - design new products speedily (computer aided design),
  - enable customisation of a product to a customer's particular specification (computer integrated manufacturing),
  - Differentiate the product by using IT-based components to make it unique (e.g. Automated Teller Machines when they were first introduced, although they are now standard).
- (c) Find a market niche (focus strategy).
  - Use sales data to identify customer preferences and spot unusual trends,
  - Use IT to analyse market research and statistical information.



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### **IT is required by the economic context:**

Earl argues that IT is an enabling technology, and can produce dramatic changes in individual businesses and whole industries, especially where there are other major forces for change. For example, the US airline system was deregulated, which encouraged the growth of computerised seat-reservation systems (e.g. SABRE as used by American Airlines, always displayed American Airlines flights preferentially). In short, IT can be both cause of major changes in doing business and a response to them.

### **IT affects all functions and levels:**

IT can permeate the different layers of management as senior managers make further use of it. This trend is likely to continue, and so IT will become a routine a feature of office life, a facility for everyone to use. IT is no longer a centralised technology.

### **IT can revolutionise management information:**

More advanced executive information systems, and decision support systems, and expert systems can be used to enhance the flexibility and depth of MIS.

IT has also a longer term effect on the production processes about which information is collected. For example, computer integrated manufacturing changes the cost profile of many manufacturing processes. In short, the era where manufacturing was a mass production exercise producing standardised products and employing a large labour force, so that wages were the predominant costs, has, in some sectors been replaced by one in which information technology and computer equipment are the dominant costs. A number of new costing systems (e.g. activity based costing) have been developed to reflect this. In broad terms, the ingredients of product costs, and hence the techniques used to measure them, have been substantially altered by IT.

**Stakeholders:** A stakeholder is a person or organisation that has an interest in an enterprise. IT involves many stakeholders, as many parties both within and outside the organisation have an interest in IT. An organisation must take steps to manage these external stakeholders.

Parties interested in an organisation's use of IT are as follows:

- a. Other business users (e.g. for common standards for electronic data interchange). These can form into lobbying groups for a particular industry.
- b. Governments (e.g. telecommunications regulation; national competitiveness such as the Alvey program in the UK, or the Esprit program for the EC).
- c. IT manufacturers must often pioneer the development and use of the technology. Users need to make their voices heard so that they can influence what manufacturers do. The existence of competing standards is a problem.
- d. Consumers (e.g. in testing IT-based products such as teleshopping).
- e. Employees and internal users (as IT affects work practices).

**The importance of technology:** Any strategic view of IT must take technical issues into account. Ignoring the technology-based choices in IT is rather like ignoring interest rates when you are borrowing money.



A simple example from the financial services industry, which is more dependent than many on information systems, is provided by two UK building societies. Their merger was abandoned because of incompatibility between their computer systems.

### **The importance of management:**

It is argued that success or failure in implementing IT is a result not so much of the systems themselves but the management effort behind them. For example, information systems will fail if:

- (a) they are used to tackle the wrong problem (i.e. the use of IT has not been thought through in the wider organisational context);
- (b) senior management are not interested;
- (c) users are ignored in design and development;
- (d) no attention is given to behavioural factors in design and operation.

So, it can be seen that IT is sufficiently important and widespread to require proper planning and management attention. IT issues have to be thought out in advance as IT can affect the long term performance of the enterprise in so many ways.

### **Developing a strategic plan for information systems:**

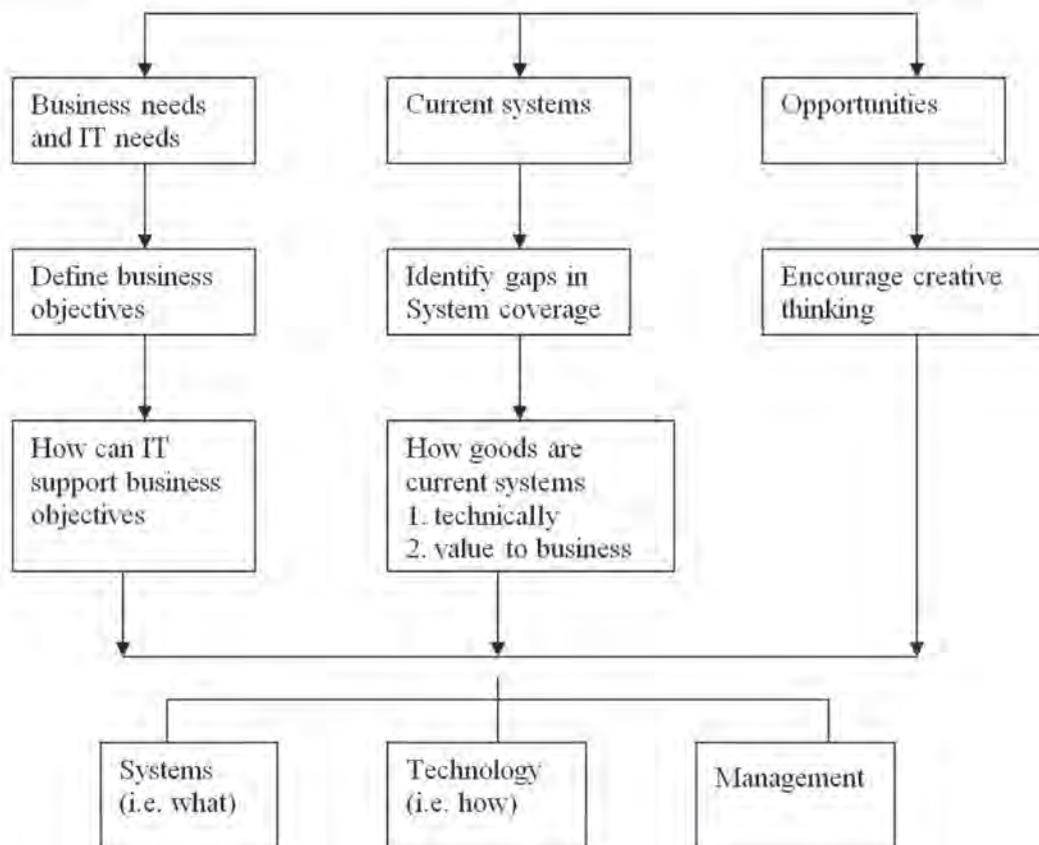
The previous section indicated why a strategic plan for information technology might be necessary. We must also consider what should be contained in a strategy, and how a strategy can be formulated.

A strategy must deal with three issues:

- (a) The organisation's overall business needs, and IT needs as a consequence,
- (b) The organisation's current use of IT and
- (c) The potential opportunities that IT can bring.

Each of these three issues involves different personnel, and requires a slightly different approach.

A diagrammatic representation of strategy development for information is given below.



### Identifying business needs:

The identification of business needs and the information technology framework to satisfy them is at the heart of a strategy for information systems and information technology. The IS and IT strategies should be part of the overall strategy for the organisation. So, the IS strategy should be conducted whenever the organisation prepares its long-term marketing or production strategies.

This is not always feasible, especially if an organisation's use of IT has grown in a haphazard fashion, and the purpose of the strategy is to impose some sort of order on an already chaotic situation.

There are a number of techniques for identifying business needs. One such technique is the use of critical success factors (CSFs):

- (a) Business objectives are defined (e.g. raise earnings per share, develop new businesses).
- (b) Identify, with the active involvement of the managers concerned, the CSFs, whose success is necessary out for the organisation to flourish (e.g. new markets, new products, and core activities). The CSF to run a successful mail-order business is speedy delivery. CSFs can be generic to the industry as a whole, or arise solely within the organisation depending on its particular position in the market place. For example, a CSF for a private-sector mail



company is to provide a better service, if possible, than the dominant supplier, the Post Office.

- (c) Develop the information systems to support them (e.g. develop customer information systems; improve the financial control reporting system).

### Evaluating current systems:

This part of the strategy study is necessary so that the organisation might have some idea where it is starting from, as, later, it will aid in the targeting of resources. For example, an organisation with good financial reporting systems may have no marketing information systems. Gaps in the IS coverage are identified here.

Secondly, the efficiency of current systems coverage is also evaluated. Are users happy? Is the system reliable?

#### Opportunities:

Opportunities cannot always be identified from the two processes above.

- Instead, creative
  - Thinking in the organisation should be encouraged.
- (a) The organisation should foster innovation, by encouraging and supporting new ideas from its staff, and consulting users and customers. The strategic plan may not be able to identify; small, incremental improvements to systems.
- (b) Users should be encouraged to develop their own ideas by providing them with the technological tools to do so.

The three 'legs' of the strategy for information are as follows:

- (a) The information systems (IS) strategy deals with the long-term plan to decide what the information requirements of the business are.
- (b) The information technology (IT) strategy deals with particular technological questions relating to computing, communication, data and applications. For example, a company might take an open systems approach.
- (c) The information management (IM) strategy is the basic approach an organisation has to the management of its information systems, including:
- Centralised or Decentralised management
  - Co-ordination and control of IT expenditure
  - Systems development methodologies.

### Research and Development Strategy:

Research and development (R&D) is a necessary activity for some companies, but research and development activities are often poorly focused or not integrated into the organisation.



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A company's strategy for R&D is determined by a number of basic issues.

- (a) Does the company see itself as a technological innovator? Volkswagen aims to be a leader in all automotive technologies.
- (b) Does the company see itself as a technological follower? (e.g. learning from a leader's mistakes, or waiting until the technology is proven population). Fiat probably belongs in this category.

Arguably, this is part of the company's mission.

The position of the R&D department within the organisation should be determined by which of the alternatives outlined above.

- (a) If the R&D function is a technological innovator, it will be engaged in long-term and more basic research. It will not be involved in the engineering of current models.
- (b) If the R&D function is as a follower then it will be more involved on specific projects. In Fiat, the R&D function is part of advanced engineering.

Another strategic choice for R&D is whether it is:

- (a) centralised; thus enabling technology transfer, and research synergies and
- (b) distributed by business unit, with a closer relationship between R&D and the business units it supports.

The third important area of formulating the strategy of production activity, particularly in manufacturing industries is planning and managing R&D efforts. R&D efforts may include a wide range of activities, e.g.:

- Developing new products, redesigning existing products in accordance with consumer tastes and preferences,
- Enabling use of complex technology,
- Process re-engineering to match the use of available raw materials, or to meet local market demand for products.

The objective of R&D efforts may be penetrating markets or diversifying product features. For many companies, the over-riding objective of R & D is matching internal capabilities (strengths) with environmental (external) opportunities by way of improvement in processes or products along with the policy of being leaders or followers in R&D. To be R&D leader implies being pioneer in turning out new and innovative products derived technologically. This may be regarded as an ambitious and also exciting strategy. But it may also be very difficult to attain and rival companies may win over. On the other hand, R&D strategy may be aimed at being a follower, i.e., an innovative imitator. This type of strategy can be adopted with a strong and ongoing marketing research unit as also R&D experts to pick up the innovational scope in a product introduced in the market by a rival.

The focus of R&D strategy may be basic research (which is likely to be more time-consuming and expensive), or applied research in which the results may be followed by commercial application. Process improvement in the above context may imply developing more automatised operations or more labour-intensive operations.



Above all, R&D strategy depends basically on resource availability. The strategic decision needs to be made keeping in view either a large, medium or low level R&D budget. Options in R&D strategy also lies in either setting up an R&D unit internally, or assigning R&D to agencies on contract, or collaboration with technical institutions and University authorities to continue research in thrust areas of interest to the company. But in-house R&D may be preferable if and when technological advancement is not fast, there is potential growth of market demand of reasonable degree, and not many new competitors are likely to emerge. Even then, any large R&D budget may not be desirable as it may be risky; the results of R&D effort may not be satisfactory. It is also more time-consuming. The second option of having a contractual arrangement with an agency with R&D expertise may be preferable if technological progress is slow but there is rapid market growth, and an in-house R&D unit cannot be set up quickly.

There is yet another R&D strategy which is aimed at low cost production so as to make the product price competitive. Large-scale production and mass marketing are critical in this approach. It involves concentration on improvement of technology and upgrading plant and equipment.

R&D might be a centralised part of the production function, under the control of the production director. Or it might be a part of the marketing function, under the control of the sales and marketing director. A third possibility is to have an independent R&D function, with its own director having a seat on the group's board of directors. The advantages of having a centralised research unit are as follows:

- (a) A large central research unit might succeed in avoiding duplication on achieving economies of scale that would not be possible if research effort was fragmented. The possibility that research work might be duplicated in different parts of the business would be avoided.
- (b) In some industries, the successful outcome of research and development work might be vital for the long-term survival and growth prospects of a company. If R & D is an important element in strategic planning, it would be advantageous to have a central research unit, for the following reasons:
  - (i) Research strategy could be planned more easily on an integrated basis.
  - (ii) Strategic targets for research could be established.
  - (iii) The most beneficial allocation of resources to research work could be decided on more easily.
  - (iv) The research team could plead its own case more forcefully as a unified department, in strategic planning and budgeting meetings.
  - (v) A central research unit would help research workers to exchange ideas and knowledge more freely. With good management, a work environment that helps to promote innovation and new ideas could be built up, and results might be better than if research units were fragmented into small 'pockets' throughout the company or group.
  - (vi) With a large research unit, there would be some senior management within the unit who have research skills themselves. When research teams are isolated and small, they are unlikely to have managers with research skills, and a proper understanding of the objectives and problems of research work.



- (vii) Many research ideas fail. Management should try to limit the likelihood of failure, but accept that in individual cases, research costs will have been wasted. With a central research-unit, management should have the knowledge and skills to:
- identify potentially successful research work more skillfully,
  - recognise when to call unsuccessful research to a halt, instead of letting it carry on in the vain hope of a breakthrough,
  - control the overall percentage of project failures.
- (viii) Research costs ought to be easier to control when research is centralised than if research is fragmented.
- (ix) In the Pharmaceuticals industry, new products are subject to strict government controls, and so having a central research unit should help the liaison between the company and the government controllers.

The development departments, or the R&D department as a whole, might be subordinated to the marketing function, or alternatively the production function. In industries where innovation is an important feature of the markets, there would be a strong case for an independent R&D department with an R&D director at board level. The most suitable organisation depends on the nature of the industry.

For example, in the gas industry, R&D has been more dependent on production technology - e.g. the extraction of natural gas from the North Sea and Irish Sea - than on marketing considerations, and so the R&D department would most suitably be either independent or subordinated to the production or an engineering function. In contrast, many consumer goods ought to be developed with a marketing orientation, and R&D would be suitably subordinated to the marketing function in these industries.

R&D management has to show a keen awareness of marketing objectives, but at the same time recognise the practical constraints of production possibilities and costs. If R&D is subordinated to the marketing function, it must still retain close links, with production; similarly, if R&D is subordinated to the production function, it must be responsive to a marketing approach. An independent R&D function should liaise closely with both production and marketing.

The danger that R&D might produce an item for which there is an insufficient market is a real one, which a company's management must seek to prevent. For example, in spite of its very good consumer image, Concorde remains an example of an aircraft that was a research success, but a commercial failure.

## **Supply Strategy:**

There are six aspects to supply strategy.

- (a) Sources of supply. What are the sources available? Where are they? What sort of suppliers are they and are they reliable? Are they likely to treat you as a valued customer or not?
- (b) Spread of supply. Should there be just a single source of supply in order to get bulk purchase discounts and minimise costs, or should there be dual sourcing to avoid the risk of lost production and supplier complacency?



- (c) Cost of supplies. How quickly can cost discounts through volume purchases be achieved? Can the supplier be convinced that if he supplies at a low price to encourage low-cost high volume sales, he will soon reap the benefit of large orders?
- (d) The make or buy decision.
- (e) The suitability of the existing supplier. Can existing suppliers produce goods to the required standard? If new standards of quality are required, can existing suppliers match them or not?
- (f) The image or reputation of the supplier. This could be a selling point for the buyer's own customers - e.g. major car rental firms are pleased to admit that they rent Ford, GM or other makes of car.

**Porter (Competitive Strategy) identifies four key issues in purchasing strategy.**

1. Stability and competitiveness of the supplier pool. It is desirable to purchase from suppliers who will improve or maintain their competitive position, so that the firm will be able to carry on buying supplies which are of a competitive quality or price. In addition, the stability of supply will prevent a firm from being forced to switch sources of supply when an existing supplier stops producing the goods or services.
2. Finding the optimal degree of vertical integration. Should a company be producing its own supplies? i.e. this is the make or buys issue.
3. Allocation of purchases among qualified suppliers, and so creating bargaining power. The bargaining power of a buyer is strengthened by having alternative sources of supply.
4. Creating the maximum leverage or influence with chosen suppliers.

A company can exert influence over suppliers by adopting the following measures:

- Spreading purchases between suppliers,
- Encouraging new suppliers to develop,
- Avoiding over-dependence on a single supplier for technical support, engineering support or product design support,
- Promoting the standardisation of product specifications, so as to reduce product differentiation,
- Posing a threat to suppliers of backward vertical integration if supply prices become too high, or product quality and lead times become unreliable,
- Manufacturing some of the product in-house and only purchasing the balance externally.

### **Standardisation of products and components:**

The possible advantages arising from the adoption of a standard product and component parts would initially benefit the supplier.

- a. It permits 'flow type' production with long production runs and reduced unit costs.



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- b. The production method is uniform and so there can be extensive mechanisation, probably reducing waste.
  - c. Design and tooling is simpler because it relates to a single production method.
  - d. Unit costs may be further reduced by discounts on the larger purchase quantities of the raw materials and parts.
  - e. Less operative training is needed.
  - f. Design staff is less pressurised.
  - g. Standard processes mean that production management is now simpler.
  - h. Lower costs of inspection will be incurred.
  - i. Production may well be speeded up, reducing delivery times & increasing competitiveness.
  - j. Required levels of inventory may be reduced.

However, although suppliers should benefit, the buyer will benefit too from standard components. Items (d) and (e) above apply equally here, plus the following additional benefits.

- a. The manufacturer realises that the components are tried and tested.
- b. Stock control is simpler (less variety).
- c. An improved spare parts service should be available.
- d. Since suppliers' costs will be cheaper, prices should be lower.
- e. There should be more suppliers willing to produce the standard items, thus improving the buyer's strength against his suppliers.

Possible disadvantages of product standardisation are as follows.

- (a) It is easy for a surplus of supply to occur since easier and cheaper production tends to lead to over-capacity.
- (b) Equipment, technical awareness and management may, after a time, become too established inflexible and stuck-in-the mud.
- (c) Customers may demand a lower price for the standard product, counterbalancing savings and increased profit margins.
- (d) Product design of new models may be inhibited by standard components.
- (e) A standard component may be used in a product even though it would be better if a modified version were adopted.

## **Materials Strategy:**

### **Materials Requirement Planning (MRP):**

One aspect of resource planning is materials requirements planning.



Wild defines MRP as a 'technique by which known customer demand requirements are exploded to produce gross parts, components or activity requirements'. These gross requirements are compared with available inventories to produce net requirements which are then scheduled within available capacity limitations. MRP is thus used for scheduling, inventory management and capacity management.

Materials requirements planning (MRP) is a computer-based information system that is more limited than CIM. It is designed to plan and control raw materials used in a production setting. Materials Requirement Planning (MRP) originated in the early 1960s as a computerised approach for coordinating the planning, acquisition and production of materials. MRP assumes that the demand for materials is typically dependent upon some other factor, which can be programmed into the computer, the timing of deliveries is vital to avoid production delays. For example, an auto manufacturer need only tell a computer how many autos of each type are to be manufactured. The MRP system then will generate a complete list of every part and component needed. MRP, in effect, creates schedules of when items of inventory will be needed in the production departments. If parts are not in stock, the computer will automatically generate a purchase order on the proper date (considering lead times) so that deliveries will arrive on time.

Important requirements for the operation of a MRP system are as follows:

- (i) Master production schedule: It specifies the quantity of each finished unit of products to be purchased along with the time at which each unit will be required.
- (ii) Bill of material file: This file specifies the sub-assemblies, components and materials requirement for each item of finished goods.
- (iii) Inventory file: It maintains details of items in hand for each sub-assemblies, components and materials required.
- (iv) Routing file: This file specifies the sequence of operations required to manufacture components sub-assemblies and finished goods.
- (v) Master parts file: It contains information about the production time of sub-assemblies and components produced internally and lead time for externally procured items.

### Uses of MRP:

- (a) The bill of requirements. This identifies the total materials needed for the final product, and how they are to come together. It will identify in the short term what is readily available, and in the long term what is needed to be developed or bought in (and perhaps what is at risk from unstable or unreliable suppliers). The analysis will embrace not just the bought-in raw materials and components, but the manufactured major sub-assemblies.
- (b) The master production schedule. If the product is scheduled for a long production run, the planning period for inventory levels and plant capacity will clearly be longer than for a short run. In general however, Wild suggests that the planning period should be such that all the required materials can be acquired and all components prepared with parts and sub-assemblies ready for the assembly of the final product. There may be a learning curve effect: clearly with a new product, with perhaps new designs and methods, early



assembly may be both slow and wasteful of material, requiring more material to be made available.

- (c) The opening inventory. This is very much a short-term planning problem. When any new project starts, especially if it is based on standard components, consideration must be given to the available levels of uncommitted inventory, i.e. stock not already allocated to existing orders, so that the level of purchases and lead times can be accurately computed.
- (d) Opening production capacity. Capacity planning decisions are likely to be a long-term consideration and the planned production capacity and the planned materials requirements will obviously be inter-related matters.

From this, Wild identifies five outputs from MRP as follows:

- (a) Both the short-term and the long-term purchase requirements.
- (b) Short-term and long-term activity schedules expressed in terms of manufacturing demands, quantities and deadlines.
- (c) The probabilities of expected shortages.
- (d) Free inventory.
- (e) The possible available surplus capacity.

There are two other short-term factors that can be considered.

- (i) The batch sizes or production runs, bearing in mind the level of both short-term sales and levels of finished goods inventory required.
- (ii) The level of safety stock that is needed in case the sales forecasts prove to be conservative and demand starts to outstrip production.

### **Manufacturing Resource Planning (MRP-II):**

It is a closed-loop manufacturing system that integrates all facets of a manufacturing business, including production, sales, inventories, schedules, and cash flows. The same system is used for both the financial reporting and managing operations (both use the same transactions and numbers). MRP-II uses an MPS (master production schedule), which is a statement of the anticipated manufacturing schedule for selected items for selected periods. MRP also uses the MPS. Thus, MRP is a component of an MRP-II system.

### **Capital Assets Strategy:**

Resource planning for capital equipment calls for some consideration of the following factors.

- (a) What level of production capacity is desirable? This has been discussed earlier.
- (b) Plant location. The location of factories and other business premises is influenced by market proximity, the cost of transport, access to supplies, the market for skilled labour and external economies of scale (e.g. the closeness of specialist ancillary industries). Government incentives too, might influence location decisions, especially where companies are sufficiently flexible to relocate their operations fairly easily. It might be interesting to



see the long term consequences of the abolition of 100% first year capital allowances in the UK. It has been suggested that manufacturing industries might be tempted to relocate abroad, possibly in the Republic of Ireland where there is currently only a 10% corporation tax on manufacturing industry profits.

- (c) Timing of investments. Clearly, the timing of investments can be crucial. Investing too soon will leave resources idle until demand picks up, whereas investing too late might yield a large share of the market-to competition.
- (d) Flexibility of capital resources. Capital intensive industries tend to be rather inflexible in the amount of capital they tie up. If scale economies are an essential feature of their high-volume capacity, there must be a provision whereby plant is kept operating at economic levels, even if this means making more investment to facilitate the switching of product ranges.
  - (i) British Telecom uses the variations in telephone call tariffs to suppress demand in the busy hours of the day (office hours) and to increase demand at other times (in the evenings etc). By spreading the call load, telephone exchange equipment and the telephone communications network are used more economically.
  - (ii) In contrast, the local electricity supply company in Florida maintains its flexibility by buying in extra power requirements from the neighbouring system in Georgia (where the power company is only too pleased to sell its surplus capacity to Florida). Later in the decade, Florida will have to invest in new plant, but for the time being, it can defer its choice between consumption of fossil fuels and nuclear power, until it is clearer how the environmental debate, and the political lobbying that goes with it, resolves itself.
- (e) Capital investment and manpower. Capital investment decisions inevitably have some bearing on manpower planning. New technology calls for new skills, and so the skills of an existing workforce might become less valuable as new capital investments are undertaken. To a large extent, too, capital and labour are substitute economic resources. By investing more heavily in capital, an organisation might implicitly be deciding to invest rather less, heavily in its workforce.
- (f) Competitors. Capital equipment purchase can form part of one of a company's generic competitive strategies. Advanced manufacturing technology may be necessary, if competitors are using it, failure to keep up with developments elsewhere in the market can lead to long term deterioration in competitive position. Failure to invest sufficiently in appropriate plant or technology, and failure to manage it properly is held to be one of the long term reasons why the performance of the UK relative to, say, Japan or West Germany or Italy, is one of overall decline. Capital expenditure can lead to improved productivity.

## Distribution Strategy:

### Physical distribution management: distribution resource planning

Physical distribution management is concerned with the physical transportation & warehousing of products. The Centre for Physical Distribution Management gives the following definitions:



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- (a) Physical distribution is the broad range of activities within a company (or other type of organisation) concerned with the efficient movement of goods and raw materials - both inwards to the point of manufacture and outwards from the production line to the customer.
  - (b) Physical distribution management (PDM) is that part of management which is responsible for the design, administration and operation of systems to control the movement of raw materials and processed goods.

The term 'distribution resource planning' is also used to refer to the management of physical distribution.

It is tempting to regard the physical distribution of goods as a subsidiary activity beneath the primary task of making sales. Rising costs of freight, warehousing and stockholding, however, have forced attention towards physical distribution systems, and have stimulated the question as to how far distribution factors should influence marketing decisions, and how carefully should distribution activities be co-ordinated and integrated. In the UK, about 20% of the gross national product is involved in physical distribution, and its significance both in terms of cost and marketing effort have persuaded several large organisations (e.g. Boots, ICI, United Biscuits), to develop a fully integrated PDM system.

**PDM is concerned with the following:**

- (a) Transportation: the selection of transport vehicles, their size and utilisation, scheduling and routing, loading, the choice between purchase, leasing or rental for vehicles used by own staff, and the choice between using own vehicles or 'outside' carriers. Shipping considerations in recent years have included the growing use of containers for transportation. Potential problem areas for the future, which management will need to consider, are the size of lorries, the condition of the road network, and local legislation establishing no-go areas for heavy lorries.
- (b) Materials handling in storerooms and warehouses
- (c) Packaging
- (d) Warehousing
- (e) Inventory levels and stock control
- (f) The location of warehouses and depots to achieve an efficient physical distribution network
- (g) Order processing
- (h) Policy issues.

**Location of warehouses:**

If a company is seeking to build or acquire a new warehouse, it must seek a general area and then a specific site in that area.

- (a) Selecting the area will depend on the market potential. To minimise costs and improve delivery service (and thus increase sales), the warehouse should be sited in the middle of an area with high market potential.



The size of the warehouse (i.e. the amount invested) is also likely to influence the extent to which the market potential is exploited.

- (b) The choice of site within an area will depend on:
- (i) the sites available,
  - (ii) whether the customer will come to the supplier, or whether the supplier will deliver to the customer,
  - (iii) local transport facilities (road, rail, etc.),
  - (iv) future development in the area,
  - (v) whether a lease or a freehold is required,
  - (vi) Its geographical position within the market, area.

### **Changing patterns of physical distribution: containerisation:**

Changes in methods of distribution can have important consequences for an organisation, as the following example of containerisation might suggest. Containerised distribution has had an important-effect on long distance distribution, e.g. for imports and exports to and from the UK. Goods are loaded into containers at a container yard, and carried by lorry to a destination without the goods ever being unloaded from their container. The containers can be lifted on to lorries and the lorries driven on and off ships (alternatively, containers can also be easily loaded on board ship or on to railway trucks). Containerisation has resulted in quicker and cheaper long distance distribution. The opening of the Channel Tunnel and a rail link between the UK and France will have further significant consequences for distribution in the 1990s.

#### **Distribution resource planning and policy issues:**

Management should aim to achieve a correct balance between operating costs and customer service,

- (a) Operating costs include inventory costs, transportation costs, warehousing costs.
- (b) Customer service.

This is less tangible, but includes matters such as:

- Normal delivery time,
- Percentage of orders despatched on time,
- Responsiveness to emergency orders,
- The delivery of items to the customer in good condition,
- Order processing.

A further aim should be to improve customer service at the same time as reducing operating costs.

In recent years, there has been a development in the inventory policy of some manufacturing companies, which have sought to reduce their inventories of raw materials and component's to



as low a level as possible. Just in time procurement and stockless production are terms which describe a policy of obtaining goods from suppliers at the latest possible time (i.e. when they are needed) and so avoiding the need to carry any materials or components stock. A system of just in time procurement (JIT) depends for its success on a smooth and predictable production flow, and so a JIT policy must also be aimed at improving production systems, eliminating waste (rejects and re-worked items), avoiding production bottlenecks, and so on. Distribution resource planning addresses the problems of making the most effective use of finished goods inventories, both for manufacturers of consumer goods or capital items, and for suppliers of raw materials and component manufacturers (who might perhaps be faced with customers who apply just in time procurement techniques).

The issues which distribution resource planning should deal with include the following:

- (a) Forecasting production requirements for the firm's finished goods,
- (b) Deciding where to stock these goods,
- (c) Deciding the most suitable inventory levels at each stocking location,
- (d) Replenishment of stocks,
- (e) Production scheduling in the manufacturing division,
- (f) Vehicle load scheduling,
- (g) Transportation scheduling.

You might think that these problems are typical for any manufacturing company, and to some extent you would be correct in this view. However, distribution resource planning should have the policy aim of improving customer service at lower cost, which means doing the following.

- (a) Considering the distribution network as a whole, rather than treating each warehouse/stock location as a separate entity.
- (b) Estimating future inventory requirements and trying to anticipate stock shortages and stock-outs - i.e. not just monitoring current stock levels and re-ordering stock when a re-order level is reached.
- (c) Integrating inventory planning with production scheduling, by feeding data about anticipated stock requirements into the firm's production scheduling system.

For example, when a product is in short supply across the entire distribution network, a DRP system should be able to come up with an allocation of available stocks among the warehouses on a basis which makes best use of the stocks available. If stocks of an item are in supply at just one warehouse, a DRP system should arrange for the transfer of stocks from another warehouse to meet customer orders.

## **Inventory Policies and Strategies:**

### **Inventory Management: Traditional and Modern Approaches**

Traditional inventory management concerns how much of some item to have in stock, how much to order (or produce), and when to place the order (or commence production). The traditional



concepts most frequently tested are the economic order quantity (EOQ) and its attendant costs, the reorder level, and safety stocks. The EOQ model can also be used to determine the optimal production run. The objective of inventory management is to maintain an adequate amount of product on hand to meet demand but at the same time to minimise the costs of keeping inventories. Too little inventory can result in both internal and external failure costs. In a production setting, an inventory shortage can result in shutting down an entire factory because sufficient components are not available. However, too much inventory can tie up funds that could be invested elsewhere or worsen such problems as obsolescence and spoilage. Thus, an organisation carries inventories because of the difficulty in predicting the amount, timing, and location of both supply and demand, and the purpose of inventory management is to determine the optimal level of inventory necessary to minimise costs. Inventory may also be a hedge against inflation.

Inventory carrying costs can sometimes be transferred to either customers or suppliers. Customers can sometimes be persuaded to carry large quantities of inventory by allowing them special quantity discounts or extended credit terms. Also, if customers are willing to accept long lead times, inventory can be manufactured to order to avoid storing large quantities. Furthermore, if a manufacturer has enough control of production to know exactly when materials are needed, orders can be placed so that materials arrive no earlier than when actually needed. This just-in-time (JIT) approach relies on a supplier who is willing to take the responsibility for producing or storing the needed inventory and shipping it to arrive on time. Suppliers are more willing to provide this service when they have many competitors. JIT systems are discussed more fully below.

**Inventory costs** in addition to the costs of the purchased items have traditionally been classified as order costs, carrying costs, and stockout costs.

**Order costs** include all costs associated with preparing a purchase order.

**Carrying costs** include avoidable labour costs, rent, insurance, taxes, security, depreciation, and opportunity cost (i.e., the cost incurred by investing in inventory rather than making an income-earning investment). Carrying costs may also include a charge for spoilage of perishable items or for obsolescence.

**Stock out costs** include the costs incurred when an item is out of stock, such as the lost contribution margin on sales, customer ill will, and production interruptions.

**Purchasing** is the inventory management function that concerns the acquisition process. It encompasses choice of vendors, contract negotiation, the decision whether to purchase centrally or locally, and value analysis. The process is initiated by purchase requisitions issued by the production control function. Purchase requisitions ultimately result from insourcing vs. outsourcing (make vs. buy) decisions made when production processes were designed. For a retailer, the purchase decision is the same as the decision about what to sell. The choice of vendors depends on price, quality, delivery performance, shipping costs, credit terms, and service. Purchasers with a competitive orientation and considerable economic power may be able to extract very favorable terms from vendors. Purchasers with a cooperative orientation adopt a longer-term approach. The purchaser and the vendor are viewed as committed to a partnership involving joint efforts to improve quality. This orientation includes the purchaser's



willingness to help develop the vendor's managerial, technical, and productive capacities. Thus, it tends to result in minimising the number of vendors.

Ordering may be a complicated task when a onetime, expensive purchase is made. It may also be as simple as a phone call or a computer message. Indeed, organisations increasingly are linked with vendors by **electronic data interchange (EDI)**. EDI permits the transmission via computer of purchase orders, invoices, and payments, thereby reducing reorder times, inventories, and document-handling costs. Moreover, an organisation that has reengineered its procedures and processes to take full advantage of EDI may have eliminated even the electronic equivalents of paper documents. For example, the buyer's point-of-sale (POS) system may directly transmit information to the seller, which delivers on a JIT basis. Purchase orders, invoices, and receiving reports are eliminated and replaced with a long-term contract establishing quantities, prices, and delivery schedules; production schedules; advance ship notices; evaluated receipts settlements (periodic payment authorisations transmitted to the trading partner with no need for matching purchase orders, invoices, and receiving reports); and payments by electronic funds transfer (EFT).

Tracking purchases involves following up to anticipate any deviations from delivery times, quantities, and quality. Tracking may prevent production interruptions. The receiving function verifies the time of delivery, the quality and quantity received, and the price. It also notifies purchasing, the subunit that requested the delivery, inventory control, and accounting.

Negotiation of contracts depends on the nature of the item to be purchased. For a customised item, the organisation may use competitive bidding, with the contract awarded to the lowest and best bidder; it may negotiate with a sole-source vendor to reduce purchasing lead time; or it may order through a vendor catalog. When purchased items are standardised and in high demand, the organisation may also preselect a sole-source vendor to which orders will be sent as needed. Given great enough demand, the purchaser and vendor may even agree to a long-term contract with some terms left open. A blanket contract covers numerous items, and an open-ended contract permits terms to be added or the period of the agreement to be extended. Large organisations also must decide whether to buy centrally or locally. Buying centrally increases the organisation's bargaining power and allows it to exploit the expertise of corporate-level specialists. The latter consideration is important given the trend toward purchasing items abroad. Centralised buying is facilitated by developments in information technology (see the EDI discussion above). Buying locally is indicated when items are unique to decentralised subunits, when a just-in-time (JIT) system is in place, and when longer lead times are to be avoided.

Purchasing shares responsibility for value analysis with the production and engineering functions. Value analysis determines the purpose of an item, whether that purpose is necessary, whether a less costly standard item can be found that serves the same purpose, and whether the item can be simplified or its specifications changed to reduce the cost. Thus, value analysis is performed by teams of specialists to ascertain how the performance of an item that is either produced or purchased can be improved or its cost decreased.

Inventory models have been developed to assist the purchasing function. They are quantitative models designed to control inventory costs by determining the optimal time to place an order (or begin production) and the optimal order quantity (or production run). The timing of an



order can be periodic (placing an order every X days) or perpetual (placing an order whenever the inventory declines to X units).

**Periodic order systems** place minimal emphasis on record keeping. However, a risk of substantial overstock or understock may arise unless inventories are checked for assurance that the model is still appropriate.

**Perpetual systems** detect an inventory decline to the reorder point by entering every withdrawal on a perpetual record that shows the balance. However, physical inventories should be taken to reconcile records and verify models in either a periodic or perpetual system. An alternative is to use the two-bin method for physical storage. In this system, the reorder level amount is stored separately from the balance of the items. When the stock clerk removes the last item from the balance bin, an order should be placed. The reorder level bin is then used until the order is received.

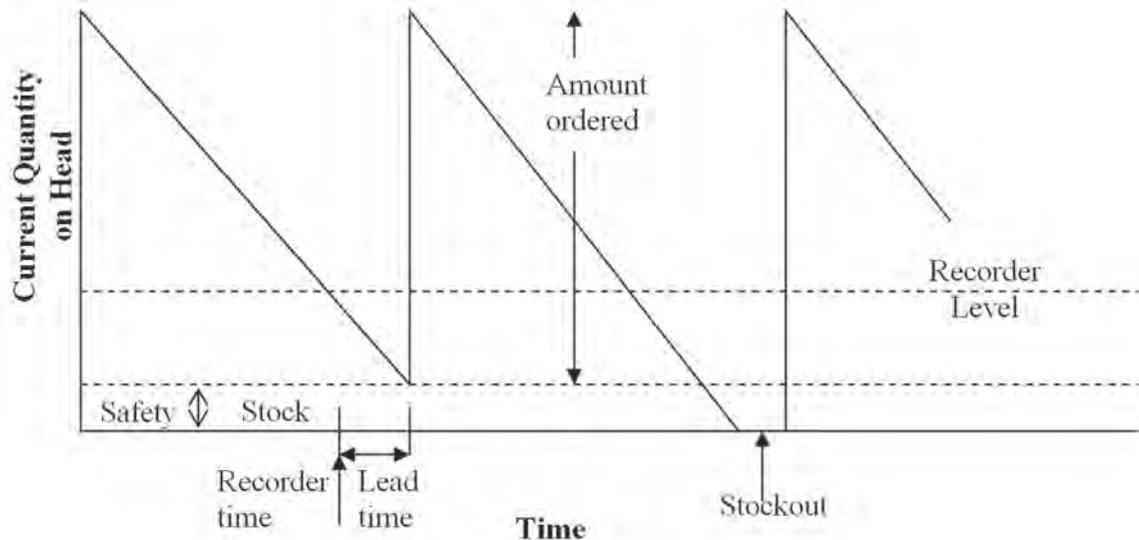
The basic **Economic Order Quantity (EOQ)** model minimises the sum of order (setup) costs and carrying costs. The following are the characteristics of this model:

Demand is known and uniform throughout the period; the fixed order costs are eliminated when the total cost equation is differentiated to arrive at the EOQ; cost per order (setup) and unit carrying cost are constant, so the model is based only on variable costs; full replenishment occurs instantly when the last item is used; stockout costs are zero; and no safety stock is held. If  $a$  is the variable cost per order (setup),  $D$  is the periodic demand in units, and  $k$  is the unit periodic carrying cost, the formula for the EOQ is

$$EOQ = \sqrt{\frac{2aD}{k}}$$

The average level of inventory for this model will be one-half of the EOQ. The formula shows that the EOQ varies directly with demand and order (setup) costs, but inversely with carrying costs. Thus, the EOQ model is a push system; it is based on anticipated future demand, not the pull of actual current demand. Moreover, the EOQ is a periodic model. The number of orders (or production runs) per period is given by the periodic demand divided by the EOQ. The EOQ results from differentiating the total cost with regard to order (or production) quantity. It is the minimum point on the total cost curve. It also corresponds to the intersection of the variable carrying cost and variable order cost curves. The total cost equals the sum of variable order costs  $[(D \div EOQ) \times a]$ , variable carrying costs  $[(EOQ \div 2) \times k]$ , and fixed costs.

In addition to minimising the sum of order costs and carrying costs, an organisation must minimise the cost of holding safety stock and the cost of stockouts. Safety stock is the amount of extra inventory that is kept to guard against stockouts. It is the amount at the time of reordering minus the expected usage while the new goods are in transit. The problem may be diagrammed as follows:



The EOQ determines order size, and the reorder point is the intersection of the reorder level and the downward-sloping total inventory line that allows sufficient lead time for an order to be placed and received.

Modern inventory management has departed from the EOQ approach in favour of the Just-In-Time (JIT) model. U.S. companies have traditionally built parts and components for subsequent operations on a preset schedule. Such a schedule provides a cushion of inventory so that the next operation will always have parts to work with a just-in-case method. In contrast, JIT limits output to the demand of the subsequent operation. Reductions in inventory levels result in less money invested in idle assets; reduction of storage space requirements; and lower inventory taxes, pilferage, and obsolescence risks. High inventory levels often mask production problems because defective parts can be overlooked when plenty of good parts are available. If only enough parts are made for the subsequent operation, however, any defects will immediately halt production. The focus of quality control under JIT shifts from the discovery of defective parts to the prevention of quality problems, so total preventive maintenance and zero defects are ultimate goals. Higher quality and lower inventory go together.

JIT is a reaction to the trends of global competition and rapid technological progress that have resulted in shorter product life-cycles and greater consumer demand for product diversity. Higher productivity, reduced order costs as well as carrying costs, faster and cheaper setups, shorter manufacturing cycle times, better due date performance, improved quality, and more flexible processes are goals of JIT methods. The ultimate objectives are increased competitiveness and higher profits.

JIT systems are based on a manufacturing philosophy popularised by the Japanese that combines purchasing, production, and inventory control. Minimisation of inventory is a goal because many inventory-related activities are viewed as nonvalue-added. Indeed, carrying inventory is regarded as a symptom of correctable problems, such as poor quality, long cycle times, and lack of coordination with suppliers. However, JIT also encompasses changes in the production process itself. JIT is a pull system; items are pulled through production by current



demand, not pushed through by anticipated demand. Thus, one operation produces only what is needed by the next operation, and components and raw materials arrive just in time to be used. To implement this approach and to eliminate waste of materials, labour, factory space, and machine usage, the factory is reorganised to permit what is often called lean production.

Plant layout in a JIT/lean production environment is not arranged by functional department or process but by manufacturing cells. Cells are sets of machines, often grouped in semicircles, that produce a given product or product type. Each worker in a cell must be able to operate all machines and, possibly, to perform support tasks, such as setup activities, preventive maintenance, movement of work-in-process within the cell, and quality inspection. In a pull system, workers might often be idle if they were not multi-skilled. Hence, central support departments are reduced or eliminated, space is saved, fewer and smaller factories may be required, and materials and tools are brought close to the point of use. Manufacturing cycle time and setup time are also reduced. As a result, on-time delivery performance and response to changes in markets are enhanced, and production of customised goods in small lots becomes feasible.

A cellular organisation requires workers to operate as effective teams, so employee empowerment is crucial in a JIT/lean production system. Greater participation by employees is needed to achieve continuous improvement and zero defects goals, so they may, for example, have the power to stop production to correct a problem, be consulted about changes in processes, or become involved in hiring co-workers. Thus, managers in such a system usually play more of a facilitating than a support role.

The Japanese term kanban and JIT have often been confused. JIT is the total system of purchasing, production, and inventory control. Kanban is one of the many elements in the JIT system as it is used in Japan. The word kanban means ticket. Tickets (also described as cards or markers) control the flow of production or parts so that they are produced or obtained in the needed amounts at the needed times. A basic kanban system includes a withdrawal kanban that states the quantity that a later process should withdraw from its predecessor, a production kanban that states the output of the preceding process, and a vendor kanban that tells a vendor what, how much, where, and when to deliver. U.S. companies have not been comfortable with controlling production using tickets on the production floor. Computerised information systems have been used for many years, and U.S. companies have been reluctant to give up their computers in favour of the essentially manual kanban system. Instead, U.S. companies have integrated their existing systems, which are complex computerised planning systems, with the JIT system.

Another feature of the lower inventory levels in a JIT system is elimination of the need for several traditional internal controls. Frequent receipt of deliveries from suppliers often means less need for a sophisticated inventory control system and for control personnel. JIT also may eliminate central receiving areas, hard copy receiving reports, and storage areas. A central warehouse is not needed because deliveries are made by suppliers directly to the area of production. The quality of parts provided by suppliers is verified by use of statistical controls rather than inspection of incoming goods. Storage, counting, and inspecting are eliminated in an effort to perform only value-adding work. Thus, the supplier's dependability is crucial.

Organisations that adopt JIT systems therefore develop close relationships with a few carefully



chosen suppliers who are extensively involved in the buyer's processes. Long-term contracts are typically negotiated to reduce order costs. Indeed, some major retailers have agreed to continuous replenishment arrangements whereby a supplier with superior demand forecasting ability essentially tells the buyer when and how much to reorder. Buyer-supplier relationships are further facilitated by electronic data interchange (EDI), a technology that allows the supplier access to the buyer's online inventory management system. Thus, electronic messages replace paper documents (purchase orders and sales invoices), and the production schedules and deliveries of the parties can be more readily coordinated.

Backflush costing is often used by firms that have adopted a JIT philosophy. They regard carrying inventory as a nonvalue-added activity. Hence, components are made available just in time to be used in the production process. Backflush costing complements JIT because it simplifies costing. A traditional system tracks costs as they are incurred (sequential tracking), but backflush costing delays recording of some cost information. It treats the detailed recording of inventory data as a nonvalue-added activity. Work-in-process is usually eliminated, journal entries to inventory accounts may be delayed until the time of product completion or even the time of sale, and standard costs are used to assign costs to units when journal entries are made, that is, to flush costs backward to the points at which inventories remain.

One variation of backflush costing records materials inventory at standard cost when it is purchased. The entry is to an account such as raw and in-process inventory control. Materials arrive just in time for processing, so an entry to a separate materials inventory account is unnecessary. A materials price variance (debit or credit) may also be recorded at this time. Actual conversion costs (direct labour and overhead) are recorded when incurred in one control account. Finished goods completed during the period are debited at standard cost at the time of completion, with credits to raw and in-process inventory and conversion costs applied. After a count, raw and in-process inventory is adjusted, and a materials efficiency variance (debit or credit) is recorded for the difference between actual usage and standard usage for the amount of goods finished. The under or overapplied conversion costs (debit conversion costs applied and credit conversion costs control) are usually closed to cost of goods sold instead of being prorated because the amounts tend to be small. The final entry is to debit cost of goods sold and credit finished goods.

A greater departure from traditional methods is to recognise completion of units only at the time of sale. Thus, instead of debiting finished goods for the number of units completed, cost of goods sold would be debited for the number of units sold. In this variation of backflush costing, only one inventory account is used (inventory control) instead of two (raw and in-process inventory and finished goods). The entry at time of sale is to debit cost of goods sold, credit inventory control, and credit conversion costs applied. A still simpler possibility is to eliminate entries to a materials inventory account altogether. Accordingly, finished goods are debited when completed and credited when sold, but no other inventory entries are made. Yet another variation of backflush costing records costs (direct materials, direct labour, and overhead) directly in cost of goods sold. At the end of the period, the standard costs of the ending work-in-process and finished goods inventories are flushed back from cost of goods sold (debit WIP and FG, credit CGS). Backflush costing may undervalue inventory and is therefore inconsistent with GAAP except when the difference is not material or an adjustment is made.



When a production process consists of interdependent operations, for example, when one part must be manufactured before another operation can continue, bottlenecks result in idle time. Thus, both items waiting in the queue to be processed by the bottleneck resource and the items waiting for the output of the bottleneck resource are idle. The theory of constraints (TOC) is a short-term approach to managing bottlenecks. Its basic principle is that short-term profit maximisation requires maximising the contribution margin of the constraint (the throughput contribution). However, TOC defines all costs as fixed in the short-term except direct materials costs. Accordingly, the throughput contribution equals sales dollars minus direct materials costs. This approach is a type of supervariable costing because only direct materials costs are inventoried. The objective of TOC is to maximise throughput contribution and to minimise investments (defined as materials costs of all inventories, plus R&D costs, plus fixed assets) and other operating costs (defined as all operating costs other than direct materials costs necessary to earn the throughput contribution). TOC identifies the bottleneck resource that determines the throughput contribution (the resource with large inventories waiting to be processed). The bottleneck resource establishes the processing schedule for nonbottleneck resources. Actions should then be undertaken to improve the capacity of the bottleneck so that the increase in the throughput contribution exceeds the additional costs. Modern inventory management is often accomplished in the context of automated manufacturing, whether involving one piece of equipment, a cell, or an integrated plant.

A computer-integrated manufacturing (CIM) system involves designing products using computer-aided design (CAD), testing the design using computer-aided engineering (CAE), manufacturing products using computer-aided manufacturing (CAM), and integrating all components with a computerised information system. Accordingly, CIM entails a holistic approach to manufacturing in which design is translated into product by centralised processing and robotics. The concept also includes materials handling. The advantages of CIM include flexibility, integration, and synergism. Flexibility is a key advantage.

A traditional manufacturing system might become disrupted from an emergency change, but CIM will reschedule everything in the plant when a priority requirement is inserted into the system. The areas of flexibility include varying production volumes during a period, handling new parts added to a product, changing the proportion of parts being produced, adjusting to engineering changes of a product, adapting the sequence in which parts come to the machinery, adapting to changes in materials, rerouting parts as needed because of machine breakdowns or other production delays, and allowing for defects in materials. Benefits of CIM include improved product quality (less rework), better customer service, and faster response to market changes, greater product variety, lower production costs, and shorter product development times. JIT is sometimes adopted prior to CIM because JIT simplifies production processes and provides a better understanding of actual production flow, which are essential factors for CIM success. The flexibility offered by CIM is almost a necessity for JIT suppliers. For example, a company that provides JIT deliveries to automobile plants cannot adapt to changing customer production schedules with a manual system unless a high inventory level is maintained. The emphasis is on materials control rather than the direct labour control that is dominant in most cost systems. CIM is an addition to, not a substitute for, other types of manufacturing concepts such as JIT. In other words, JIT should already be in place for CIM to work most effectively.



**Enterprise resource planning (ERP):** It is the latest phase in the development of computerised systems for managing organisational resources. ERP is intended to integrate enterprise-wide information systems. ERP connects all organisational operations (personnel, the financial accounting system, production, marketing distribution, etc.) and also connects the organisation with its suppliers and customers.

## **Human Resource Management Policies and Strategies:**

The concept of Human Resource Development (HRD) has evolved over time with the recognition of people employed in organisations as a resource. In a comprehensive sense, HRD is defined as a process by which employees are encouraged and helped in a continuous and planned way to (a) acquire and sharpen capabilities to perform functions relating to their present or future positions, (b) develop their general abilities as individuals, (c) identify and make use of their own inner potentials for their own and/or organisational purposes and (d) develop an organisational culture whereby superior-subordinate relations, team work and collaboration among sub-units may lead to strengthening healthy work ethos, motivation and pride of employees.

Strategic management of human resources includes assessing staffing needs in the light of strategies formulated and developing a staffing plan for implementation of strategy. The compensation and incentive payments necessary to motivate technically skilled employees and managers also need to be kept in view in connection with the staffing plan. The basic policy in that respect is to be that of linking corporate earnings with individual benefits.

Implementation of strategy often requires changes to be initiated in the organisation structure which may lead to changes in power-relations and scope of social interactions among members. The managers and employees are subjected to changes in their roles, prerogatives and power. New values and priorities as well as the newly formed work groups and informal groups may lead to behavioural resistance to desired improvements. Hence there is necessity of guidelines being provided to facilitate strategy implementation and improve human relations.

There are ways and means to ensure that managerial attitudes and roles match the required strategy implementation efforts. Managers may be transferred to new positions offering scope of career development, promotions, job enlargement and enrichment. Besides workshops may be held aimed at leadership development.

Indeed it is considered important that managerial values, skills and abilities required for implementing strategy should be kept in view at the strategy formulation stage itself. The statements issued by Executives should also reflect their personal commitment to strategy implementation as well as convey their support and rewards for achieving the strategic goals.

The style of management and supervision may require stress on subordinates' involvement in decision-making as much as possible with suitable rewards for valuable suggestions. Basically, the effectiveness of human resource management in the implementation of strategy is achievable through human resource planning, recruitment and selection of staff, training, appraisal of performance and compensation policy.

The purpose of HRM strategy is to reflect and facilitate the achievement of corporate-level



strategy by linking the functions of HRM with the strategic goals and objectives—securing competitive advantage either as a cost or price leader or through the unique and differentiated nature of its product, at the same time fostering the development of an appropriate organisational culture.

The following aspects of human resource strategy are required to be focused for the purpose:

- Job analysis and human resource planning before selection and recruitment of manpower,
- Recruitment and selection of staff with required skill and abilities with the process being consistent with the objectives,
- Human resource development by way of training and development programmes, performance appraisal, appropriate compensation package and incentive schemes to secure motivation.

The more important features which human resource strategy may bring to bear on the organisation are as follows:

- (i) **Orientation of the members.** HRM strategy has to ensure that individuals employed in the organisation have necessary orientation so that the mission and objectives of the organisation are internalised by the members and they have a sense of identification with the values and culture of the organisation.
- (ii) **Facilitation of organisational changes as and when called for.** The practices and procedures are required to be in conformity with the changing internal and external conditions. This is a vital role of HR strategy management.
- (iii) **Coping with diversity of workforce.** Modern organisations with highly complex nature of jobs and processes generally have a highly diversified workforce differentiated in terms of age, sex, religion, professional and technical skills and educational background. To maintain a balanced workforce with harmonious relations and providing equitable incentives and rewards are aspects of HRM functions which can sustain an effective workforce. This is a responsibility of HR strategy managers.
- (iv) **Maintaining competent and committed workforce in a competitive environment.** The intensity of market competition for enterprises has been growing fast with globalisation and liberalisation of economic policies. There are competitive strategies of low cost production and differentiation of products which may enable companies to secure a competitive edge. HRM has the responsibility of managing workforce so as to make it competent in ability as well as committed to organisational success.
- (v) **Development of core competency.** An enterprise succeeds in achieving its strategic objectives mainly on the basis of capabilities in the technical, marketing or human skills in areas of crucial importance. These are known as core competencies of the organisation which are unique internal strengths not possessed by competitors. HRM is required to undertake building up of core competency by the organisation as to secure dynamic leadership in the product market.



- (vi) **Empowered workforce as an active resource.** HR strategy is best managed when the members of an organisation are individually in control of their work and are able to realise their potentials with empowerment to take relevant decisions on their own. This is likely to secure enduring performance based achievements.
- (vii) **Appropriate work culture and ethical norms.** No organisation can get the best contribution from its members unless individuals develop a liking for challenging jobs and follow the ethical norms of the organisation functionally. This may require redesigning of jobs and work processes as well as developing trust and confidence among individuals and work groups, as also emphasising intrinsic motivation for improving performance. HRM encompasses creation of an appropriate work culture on the above lines.

Human resource strategic management is concerned with the people dimension of management. Since enterprise is a system of people who interact, it has to depend upon the people. Organisational success and survival, therefore, largely depend on how the people in the organisation will perform, i.e. on how human resources are managed. How does an organisation identify the types of people it needs and then convince them to join? What does it take to train them, to evaluate their performance, and to encourage them to stay with the organisations and contribution to its objectives? All these tasks fall within the realm of human resource strategic management.

The overall objective of human resource strategic management is to strike best match between people and organisation in order to contribute to the successful survival and growth of the organisation and help the people in achieving satisfaction of their economic and other needs. So as to accomplish this objective human resource manager has to perform four strategic functions, viz., acquisition, development, motivation and maintenance. Effective performance of these functions is inevitable in order to cope with bewildering complexity and paroxysm of business activity, technological advancement, increasing ferocity of competition, problem of low productivity and high cost and cataclysmic changes in socio-cultural environment leading to change in profile of workers, their style of functioning, attitude towards management, towards work and themselves. This is possible only if fruitful alliance between corporate strategy and human resource management is made uniting the organisation's direction with that of its employees. Human resource manager has to strategise human resource function so that its various components are harmonised firmly with corporate strategy towards improving productivity, quality and customer satisfaction.

While formulating strategy in the area of human resources, the human resource manager must concentrate on four major aspects, viz., acquisition, development, motivation and maintenance. The following paragraphs are devoted to focus on these aspects.

The first and foremost concern of human resource management is to ensure that the organisation has the right number and kinds of people at the right places, at the right time, capable of effectively and efficiently completing those tasks that will help the organisation achieve its overall objectives. As such, objective of acquisition strategy is to assess where the organisation is, where it is going and what implications these assessments have on future supplies of and demand for human resources. Attempts must then be made to match supplies and demands, making them compatible with the achievement of the organisation's future needs.



So as to achieve the above objective, suitable recruitment strategy has to be evolved. This calls for determining the job to be filled, locating potential human resources and determining how the law influences recruiting efforts. Thus, recruitment planning must begin with a thorough understanding of the position to be filled so that the broad range of potential employees can be narrowed intelligently. For this purpose, job analysis is undertaken. The manager must then pinpoint sources of human resources and decide which source to be tapped. Overall, sources of human resources available to fill a position can be categorised in two ways:

- (1) Sources inside the organisation and
- (2) Sources outside the organisation.

The existing pool of employees in an organisation is an important source of human resources. Individuals already in an organisation may be well qualified for an open position. Although existing personnel are moved laterally within an organisation, most internal movements are usually promotions. Promotion from within typically has the advantages of building morale, encouraging employees to work harder in hopes of being promoted, and helping individuals decide to stay with a particular organisation because of possible future promotion.

Where a position cannot be filled by someone presently in the organisation, numerous sources of prospective human resources are available outside the organisation. They include competing organisations, employment agencies, educational institutions, advertisement in the print media, radio, television, trade, professional and technical journals, etc.

While deciding about the method of recruitment, the management must look outside their conventional hunting grounds. So, chief executives looking for breakthrough marketers will have to raid research laboratories, non-governmental organisations, college staff-rooms and even sports-fields. The quest for managers with the ability to lead Mega projects will have to be global, and not limited to the country.

Legal and political factors should be taken into consideration before deciding about method of recruitment to fill the vacancies.

Once the recruitment plan has been prepared the selection process begins. The selection-process consists of initial screening interview. Completion of the application form, employment tests, comprehensive interview, background investigation, physical examination and final employment decision. Each step in the process seeks to expand the organisation's knowledge about the applicant's background, abilities and motivation. The focus of the selection process in the changing scenario should be not on functional expertise but for attitudes and approaches that fit the corporate objectives and culture. Among the qualities that companies will have to screen, therefore, will be interests, disposition, attainment, general intelligence, disposition, attainments, special aptitudes, and even physical makeup. For every job that a company seeks to fill, it must prepare psychological profiles of the ideal candidate. And to test candidates for a fit with that profile, companies will increasingly have to use psychographic testing techniques. In fact, the test for personality traits will involve using unconventional tools like graphology. Further, test should be made of candidates result orientation, analytical ability, initiative, communication skills and innovativeness.

With a view to ensuring that the newly selected persons are contributing their best to the accomplishment of corporate objectives, human resource manager has to evolve effective



socialisation process so as to familiarise them with corporate objectives, history, philosophy and policies and procedures and develop attitudes suited to the culture of the organisation.

After personnel have been obtained, they must be, to some degree, developed. Development has to do with the increase of skill and includes both training to increase skill in performing a specific job and education to increase general knowledge and understanding of total environment. In view of business organisations facing skill shortages and fierce competition for existing experienced staff and new entrants of good caliber and finding it extremely difficult to buy the required skills in the market place, it has become so imperative for these organisations to accord high priority to training of employees in order to update their knowledge and competence and develop special skills of self-directed leadership, self-motivated team work and self-generated creativity. Human resource manager must install comprehensive, systematic and consistent training system which is closely linked to the corporate strategy and which acts as catalyst between people, between strategy, between the customer and organisation. Training strategy so developed should be performance oriented and should address a broader market and the development of creative and innovative thinking in the organisation.

Companies relying on time-based competition will have to teach team work and streamline production techniques to their employees. Companies competing on the quality platform will have to train their workers in developing the mindset and culture for quality as well as the codified systems without which quality efforts fail.

Those who choose to compete on the strength of their innovation will have to train their employees for creativity and lateral thinking. Those having thrust on service will have to include interpersonal and communication skills in their front-line staff.

Prominent on the training agenda of the companies seeking to have competitive edge must be retraining which will involve unlearning old concepts and acquiring new skills for workers and managers whose experience has been gained in a non-competitive, low tech era.

Further, the training programmes of the organisation should be on developing an overall global business perspective as well as understanding of business strategy formulation and relationship between cross and functional strategies and multi-sidling in cross functional areas.

Finally, training programme should focus on developing the mindset that craves for a constant upgradation of knowledge and skills. Organisations which stop bringing new knowledge and skills will meet a natural death soon.

Once the training needs are determined the management has to decide techniques to be used for imparting training to new recruits as well as to the existing employees. There are various training techniques. Some of the widely used techniques are discussed below in brief.

1. **Coaching:** Coaching is on-the-job training of individuals by the supervisor in the area of specifically defined tasks. This technique is more suitable for orientation of new recruits and for helping disadvantaged employees to learn specific jobs.
2. **Job Rotation/Enlargement/Enrichment:** These are the forms of on the job individual training while emphasising on providing the trainees experience in various types of jobs, locations and departments. These techniques can be useful and helpful in developing multi skilling, operational flexibility, providing satisfaction from routine jobs and broadening of overall perspective.



3. **Lecture:** Lecture is by far the most widely used technique of training which provides an opportunity to managers or potential managers to acquire knowledge and develop their conceptual and analytical abilities. In large organisations, 'In house' lectures are organised and are supported by outside University faculty.
4. **Simulation Exercises:** Simulations are generally used for management development. The more widely used simulation exercises include case study, decision games and role playing. Case study method involves diagnostic and problem solving study of usually a written description of some event or set of circumstances on organisational problems providing relevant details. This method is suitable for developing analytical and problem solving orientation and skill and providing practice in applying management concepts, tools and techniques and enhancing awareness of the management concepts and processes.

Decision games provide opportunities to individuals to make decisions and to consider the implications of decision on other segments of the organisation.

Role playing is employed in helping trainees to disagree human relations problems, to develop insight through in-depth analysis of problems relating to human interaction and to acquire skills in interpersonal communication with particular emphasis on empathy and listening. Participants are assigned roles and are asked to react to one another as they would have to do in their managerial jobs.

Choice of a technique for imparting training depends upon profile of the trainer, the participants, the socio-cultural milieu and the organisational culture and practices, nature and type of training objectives, the content and subject area, and time and infrastructural support.

Acquisition of right kind of persons and their training and development do not necessarily enhance productivity and improve effectiveness of the organisation. What is further required is to activate the potential of the employees. Thus, an employee's job performance is the function of his ability, and willingness or desire to use his ability in achieving personal or organisational goals. This willingness or desire to act and to behave is what may be called motivation.

Therefore, motivation from a managerial viewpoint, is the process of furnishing organisation members with the opportunity to satisfy their needs by performing productive behaviour within the organisation. Managers can successfully channelise the employees' efforts towards organisational objectives by motivating them. We often tend to think of motivation in rather limited term, motivating a sales force to promote a new product, for example, motivating assembly-line workers to meet a quota. However, in actuality, there are many ways motivation plays a role in most enterprises:

- (i) People must be attracted – or motivated to join an enterprise and remain in it.
- (ii) Once on the job, employees must be induced or motivated to exert energy and effort at our acceptable rate.
- (iii) An enterprise's human resources must be maintained and developed. Company sponsored training programmes and conferences are often used for this purpose. Highly motivated employees are essential element in the success of all such activities.

While designing strategy to motivate employees, the management must bear in mind the following cardinal principles:



- (a) All reasonably healthy adults have a considerable reservoir of potential energy. Differences in the total amount of potential energy are important determinants of motivation.
- (b) All adults have a number of basic motives which can be thought of as values or outlet that channel and regulate the flow of potential energy from this reservoir.
- (c) Most adults within a given socio-cultural system may have the same set of motives or energy outlets that channel and regulate the flow of potential energy from this reservoir.
- (d) Actualisation of motive depends on specific situation in which a person finds himself.
- (e) Certain characteristics of a situation arouse or trigger different motives, opening different values or outlets. Each motive or energy outlet is responsive to a different set of situational characteristics.
- (f) Each motive leads to a different pattern of behaviour.
- (g) By changing the nature of the situational characteristics or stimuli, different motives are aroused or actualised resulting in the emerging of distinct different patterns of behaviour.

There are several strategies for motivating organisation members. Each strategy is aimed at satisfying people's needs through appropriate organisational behaviour. Some of these strategies are discussed below:

- 1) **Managerial Communication:** The most important and basic strategy for a manager is simply to communicate well with the organisational people. This satisfies such basic human needs as recognition, a sense of belonging, and security. For example, such a simple action as a manager's attempting to become better acquainted with subordinates can contribute substantially to the satisfaction of each of these three needs. As another example, a message from a manager to a subordinate that praises the subordinate for a job well done can help satisfy the subordinate's recognition and security needs.
- 2) **Theory X and Theory Y:** Another motivation strategy involves manager's assumptions about the nature of people. Douglas McGregor identified two sets of assumptions. According to him, Theory X involves negative assumptions that managers often use as the basis for dealing with people. Theory Y represents positive assumptions which managers strive to use. The basic rationale for using Theory Y rather than Theory X in most situations is that managerial activities reflect Theory X assumptions. As such, the activities based on Theory Y assumptions generally are more successful in motivating organisation people than those based on Theory X assumptions.
- 3) **Job Design:** A third strategy managers can use to motivate organisation members involves the design of jobs that organisation members perform. Earliest attempt to overcome job boredom was job rotation in which individuals are moved from job to job and thus they are not required to perform a particular job for over the long-term. Subsequently, job enlargement is another strategy developed to overcome the boredom of more simple and specialised jobs. Job enlargement involves increasing the number of operations an individual performs and thereby increasing the individual's satisfaction in work. Job enlargement programme have been found more successful in increasing job satisfaction than have job rotation programmes. In recent years, two other job design strategies,



viz., Job Enrichment and Flexitime, have been evolved. Job enrichment is the process of incorporating motivators into a job situation. The job content can be enriched in terms of providing higher responsibility, opportunity for achievement, opportunity for recognition, advancement and learning opportunities. Another more recent job design strategy for motivating organisation members is based on a concept called flexitime or flexible working hour's programmes. The major thrust of this strategy is that it permits workers to choose own working hours within hours within certain limitations. The choices of starting and finishing times can be as flexible as the organisation allows, to ensure that flexibility does not become counter-productive within the organisation, many flexitime programmes include a core period during which all employees must be on the job. Flexitime strategy has been found resulting in greater job satisfaction which typically results in greater productivity. It can also result in higher motivation levels of workers. This may enable the management in recruiting and attracting qualified employees.

- 4) **Behaviour Modification:** Behaviour modification is another strategy which can be used to motivate members of an organisation. Behaviour modification focuses on encouraging appropriate behaviour as a result of the consequences of that behaviour. According to the law of effect, behaviour that is rewarded tends to be repeated and behaviour that punished tends to be eliminated. Behaviour modification strategy emphasises on ensuring that appropriate consequences occur as a result of that behaviour. Positive reinforcement is a desirable consequence of behaviour, and negative reinforcement is the elimination of an undesirable consequence of behaviour. If a worker's arriving on time is positively reinforced, or rewarded, the probability increases that the workers will arrive on time more often. In addition, if the worker experiences some undesirable outcome on arriving late for work, each as a verbal reprimand the worker is negatively reinforced when this outcome is eliminated by on-time arrival. Both positive reinforcement and negative reinforcement are both rewards that increase the likelihood that behaviour will continue. Punishment is the presentation of an undesirable behaviour consequence or the removal of a desirable behavioural consequence that decreases the likelihood of the behaviour continuing. Managers, for example, could punish employees for coming late for work by exposing them to some undesirable consequence. Such as verbal experiment, or by removing a desirable consequence, such as their wages for the amount of time they are late. Although this punishment probably would quickly cause workers to come to work on time, it might be accompanied by undesirable side effects, such as high levels of absenteeism and turnover, if it were emphasised over the long-term. In order to make behaviour modification programmes successful, it is necessary to give different levels of rewards to different workers depending on the quality of their performance, telling workers what they are doing wrong, punishing workers privately so as to avoid any embarrassment to them and always give rewards and punishments when earned to emphasise that management is serious about behaviour modification efforts.
- 5) **Participative Management:** Another strategic approach to employee's motivation is to adopt the system of involving employees in decision making. This will elicit employee's commitment in executing decisions. Further, the successful process of making a decision, executing it and then seeing the positive consequences can help satisfy one's need for achievement, provides recognition and responsibility and enhance self esteem.



Maintenance aspect of human resources is concerned with creation and maintenance of such working conditions in the organisation as are necessary to attract the most talented people, retain them and motivate them to give their best.

For this purpose, existing system of grade salary structure, fixed annual increments and automatic adjustments to inflation has to be replaced by performance linked reward system. Under the new system, employee's reward will be linked to the corporate objectives by pegging it to the employees' contribution towards achieving them. Time has come to develop a comprehensive reward system that splits employees' compensation between company standards, individual merit and team performance. Individual reward system based on attainment of functional specific targets bearing no relationship to corporate performance should give way to team based reward system which pegs rewards of entire manpower of the business division to the achievement of its goals.

With a view to animating people to contribute their maximum to the organisation, it will be in fitness of things to institutionalise non-monetary rewards. By honouring its employees' achievements, singling out outstanding performers and offering benefits to the families, human resource manager can create a positive work culture in the organisation and build loyalty.

In feral competitive and market driven environment across the globe unleashed in the recent past by the structured policy of liberalisation, privatisation and globalisation heightened by cataclysmic developments in communicational and computational technologies and convoluted by fast changing personal, social, familial and cultural values growing sophistication and awareness of customers – both internal and external and their aspirations for better life styles and higher value for their money and seismic shift of their loyalty leading to change in both the customers choice set and complexion of competition and ushering in discontinuity, organisations, imbued with new ways of strategic thinking for exploiting these developments, and gravid with enormous capabilities to ensure increased productivity and reduced cost, improved quality, innovation in the market, a deep understanding of customer needs, delivery of world class service and global infrastructure network will gain sustainable competitive advantage and establish sway over their capabilities and add value to the organisation is knowledge and human beings are the drivers of the knowledge judgement. Ergo, the best chance of surviving and thriving in the turbulent terrain ahead hinges essentially on a firm's finesse to create value through its people and not through technology and net.

One of the prime reasons for the present somnolent state of India's industrial economy and abysmally low industrial competitiveness at 54 out of 87 countries in the global market in terms of cost and quality despite munificent natural and intellectual resources in the gross failure of majority of Indian corporates to manage the people factor. Intriguingly, people have never been considered as a source of value and competitive advantage. In fact, organisations in India have been pursuing blinkered approach to manage human resources even though the latter contributes, according to World Bank study, almost two-thirds of the wealth of nations. Under the circumstances, Indian human resource managers (HR managers) have to act as lynchpin of the organisations to reenergise business and enhance through continuous competitiveness value addition and minimisation of slippage. They have not only to perform existing functions of staffing, training and career development, compensation, performance appraisal and maintenance with new perspectives, new paradigms and innovative approaches



and new skills but also to assume the role of strategic business partners and participate actively in the front-end of strategic thinking and action, resource leveraging, change initiatives as also to act as an agent among various specialisation agencies within and outside the organisation.

HR managers have, therefore, to be considered as an integral part of corporate management, and human resource objectives and strategies need to be coalesced with strategic intent and content of the organisation. Human resource has to become the business of everyone in the organisation; it is ineluctable for the HR manager to play the role of a coordinator and to concatenate corporate vision and objectives with individual aspirations. He has to strategise human resource function in such a way that various components are tethered firmly to corporate strategy towards improving productivity, quality and saving cost. This coherence can best be achieved when human resource philosophy, objectives, strategies and processes with exclusive focus on creating best place to work in and promoting a feeling of bonhomie and joie de vivre in a convivial environment are cogently derived from corporate vision, mission, objectives and overall strategies.

In conceptualisation of the organisation's future and determining how it intends to position itself and what it aspires to do to excel locally and compete globally, the top management must call upon the expertise and experience of the HR manager? The involvement of HR managers, who are supposed to be in close and constant touch with customers – external and intimate – and are aware of their wants and needs and imbued with a perspicacious grasp of all contemporary trends, will help the organisation in evolving need based vision by consensus. Sharing of the vision before finalising it generates excitement, inculcates sense of belongingness, builds confidence and trust among the employees and help the organisation in engendering their, employees with shareholders of core values of commitment.

In performance driven economy the most daunting task of Indian corporate managers is to contrive strategy on the basis of the concept of fit between opportunities and competencies and create markets that do not exist. They have to stretch beyond the resources available to them and creatively use them so as to develop on sustainable basis new and innovative products of world class standards to cater to the extant as well as prospective market requirements at competitive price. All this is possible only if an organisation has developed core competencies. Core competencies, according to Prahalad and Haamel, is the collective learning in an organisation, especially how to coordinate diverse production skills and integrate multiple streams of technologies. It does not form part of physical asset of an organisation instead it is about leveraging the limited resources of a firm by stretching the imagination and aspirations of the people both by creatively reshaping the way the organisation competes. HR managers can play crucial role in creating and honing core competencies of a firm through hiring and nurturing the talents, fostering innovation and creativity and inebriating entrepreneurship and encouraging employees to unabashedly embrace their own dictum and unashamedly challenge - the status-quo.

A strategic plan, howsoever sapient and sound it may be, will be of little value to the company if it has not been implemented properly. In a melee of continued ups and downs, crests and troughs, key to success of an organisation is how fast it can execute and how well it can adapt. While effectuating strategic decisions top management has to create organisational arrangements that allow the firm to pursue its strategy most effectively through committing



the people and the resources to the strategic choice. Efficacious implementation of corporate and business strategies calls for formulation of functional strategies, designing organisational structure and processes developing action plans and evolving management information and control systems. Effectiveness of strategy implementation demands determining clearly to what extent the organisation will have to change so as to translate the strategy under consideration and manage the change process. HR manager has to play the role of facilitator in meaningful implementation of various strategic decisions by carrying out HR activities and proactively handling people related business issues in sync with corporate objectives and strategies. The quality and content of HR services need to be improved to reenergise the business.

This enjoins upon HR managers the responsibility of tailoring manpower planning to corporate objectives and strategies and drawing a long-term hiring programme so as to track down people endowed with knowledge, skills and behaviour best suited to achieving corporate objectives. The recruitment process has to focus on acquisition of right people who could act as missionaries at management level and mercenaries at activity level. HR manager should attempt to develop a competency matrix with the aid of internal resources keeping in view the firm's future demands. It should be followed by the personal interview to assess the behavioural competencies and the culture markets of a candidate.

With a view to ensuring that the newly recruited persons are contributing their best to the accomplishment of corporate objectives, HR manager must devise and implement tailor-made induction module, and holding up role models for them to emulate and the gradual process of indoctrination to familiarise the new recruits with corporate objectives, philosophy, policies and procedures and develop attitudes suited to the culture of the organisation. Almost all the senior management members should participate in these programmes to share the organisation's vision, philosophy and culture.

Retaining talents in the organisation requires active intervention of HR manager for the fact that the competition for people is providing to be twice as fierce as the battle for customers, and losing individuals involved in innovation in today's environment may be disastrous. HR manager must remember that knowledge professionals with astounding aspirations will gravitate organisations adopting "f" approaches, viz., focused, flexible, fun, and friendly and fast moving. It is the responsibility of HR managers in conjunction with top management to build in these operating features to attract and retain talents.

Since it is practically impossible for an organisation to hire more than a handful of better people, the only thing that it can excel in a knowledge-based society is by getting more out of the same kind of people i.e., by managing its knowledge workers for greater productivity. Thus, challenge before Indian HR managers today is how to market ordinary people do extraordinary things.

In view of metamorphic change in task requirements following wrenching changes in the business environment and the consequential changes in corporate objectives and strategies and serious problems being faced by organisations in buying the required skills in the market place, it has become imperative for organisations to accord high priority to training and developing employees in order to update their knowledge and competence, and develop special skills of self directed leadership, self motivated team work and self generated creativity and thus to realise their potentials. The onus for evolving suitable training and development strategy and



translating the same in the organisation has to be on HR manager. He has to design training system which is closely linked to the corporate strategy and which acts as catalyst between people, between strategy, between the customers and organisations. At times, extensive training fails to achieve the desired result. This is for the fact that we tend to impart training like a ritual. We do not train employees in their areas of weaknesses. The concept of training should, therefore, be changed to provide training to employees so as to have the talents they possess. The innate capacity to learn and grow is natural to human beings. Once their potential skills are whetted and polished, they would have to stay and work for the organisation.

Further overall thrust of the training and development programmes of the organisation in today's scenario should be on developing an overall global business perspective as well as understanding of business strategy formulation and relationships between cross and functional strategies and multi-skilling in cross functional areas. This will go a long way in improving their marketability which may serve as powerful instrument of motivators.

Performance appraisal has, of late, received growing attention of corporate India in view of its singular importance in motivating employees and influencing their productivity, identifying and developing behaviours and skills leading to optimal performance.

However, practices followed in this regard suffer from object arbitrariness and subjectively leading to paranoia between the management and the employees HR manager is therefore, expected to help the top management in installing foolproof performance appraisal system with clearly defined performance standards, effective monitoring system and regular discussions of performance and development of appropriate action plans. In the changed milieu, business organisations having strategic thrust on customer satisfaction will have to adopt new approach to performance assessment and embrace new dimensions. Thus, performance evaluation system will have to be linked to corporate objectives which will then be disaggregated into specific goals for every department or work unit and every employee. Method of evaluation should be such as can test employee's not just on result-oriented parameters but also on behaviour oriented dimensions.

Time has come when HR Managers in India should take initiative to install Balanced Score Card (BSC) as a system to measure and monitor organisational performance. BSC provides a comprehensive framework that translates an organisation's vision into set of critical performance indicators around the four perspectives, viz., financial, customer, internal and learning and growth, and involves drawing up a strategy map covering about 20-25 objectives spanning the four perspective, allowing information to flow down and greater involvement of the people in the task, developing departmental, team and/or individual scorecards or applying the measures to the existing performance objectives; developing information systems to record and filter his information and launching training and development programmes to help employees gain broader analytical and communication skills. The BSC, thus, identifies records and keeps track of the linkages between the processes in an organisation and establishes an ends-means relationship. The crux of the BSC is that it does not allow any one perspective dominate an organisation's focus.

In an endeavour to attract and retain talents and propel the best and brightest, HR manager has to play critical role in designing strategic reward system for rewarding individuals or teams for only those actions, attitudes and accomplishments that help the organisation in reaching its



objectives. Strategic reward system provide for a melange of fixed and variable compensation including a fixed pay short-term and long-term incentives, recognition programmes and work environment. While designing variable pay system due weightage should be accorded to client satisfaction, productivity, innovation and the effort-to-output ratio. Further, HR manager should help the top institutionalisation of non-monetary rewards and stock options to honour the employees' achievements, singling out star performers, whatever is the compensator system, it has to be transparent and the people should be taken into confidence while designing system.

Organisational exit is a serious problem plaguing corporate India in view of overriding emphasis on cost reduction and improved productivity and unless the process of existing the company is handled dexterously, it may shatter the confidence of other employees who must be inspired to improve performance of the company. HR manager has to take initiative in developing an exit system with hallmarks of consistency, compassion and cooperation.

So as to reenergise business and gain sustainable competitive advantage in global market place Indian corporates have to accord high priority to organisational development with primary focus on changing people and the nature and quality of their working relationships and thereby enhancing their effectiveness in the organisation. HR manager can help the central management in this sphere by effective use of various OD techniques such as UBO, Quality of-work-life programmes, collaboration and team building.

Outsourcing HR activities from specialised agencies is gaining expectedly growing importance in recent years across the globe in view of cost, flexibility and availability of the dexterous skill to manage knowledge workers. It has been estimated that outsourcing HR functions leads to saving of between 10 and 25% p.a. Outsourcing also frees managers from routine chores of employee-related problems to concentrate on strategic thinking, forces on business, on products and services, on business and markets, on quality and distribution. Outsourcing professionals can also help the organisation in managing knowledge workers who are posing great challenge to the former because of their heterogeneous nature and increasing numbers. HR manager is, therefore, expected to take initiative in deciding which HR activities need to be outsourced and by whom. Four parameters have to be considered between outsourcing and in-house HR operations — speed, cost, quality and confidentiality.

However, organisations will have to manage productivity of the employee outsourced, for the fact that productivity of the people they supply to a customer depends not only on how and where the workers are placed but also on who manage and motivate them. It is doubtful if the outsourcing agency has hardly any control over these aspects. If employee relations are outsourced, HR managers need to work closely with the outsourcing agencies on the professional development, motivation, satisfaction and productivity of the knowledge workers.

Organisations must remember that escalation of compensation may not be the key determination in retention of talents. As a long-term measure, performing culture will have to be created where talents bloom and blossom and people are enthused and enamoured to contribute their best to achievement of the organisational objective. The hallmarks of performing culture are transparency, objectivity, freedom of expression, total involvement of the people in the affairs of the organisation and consistency of the behaviour of the top managers with their spoken values. Performing culture is always people oriented where employees are treated with dignity



and respect; managers support, mentor and inspire their employees to use their drive, initiative and creativity in performing their job. HR managers has to play facilitating role in creating and developing such type of culture.

All this is not possible without profound change in perceptions and mindless of corporate managers and paradigm shift in leadership style from transnational to transformation so as to move from exercising gross power of authority, which only produces compliance to the subtle power of influence which secures commitment and passes ownership down the line. As a catalytic agent HR manager has to change the mind sets of top management and helps them to learn to direct their employees through vision, imagination and ideas and fire their desire to reach the destination; generate a sense of pride and ownership in the organisation and provide life satisfaction to them.

To encapsulate, HR managers in India have to play multi-pronged role of a coordinator, developer, facilitator and catalytic agent to revitalise the business of the organisation and gain sustainable competitive advantage in the global market place. They have to be ubiquitous in the organisation to manage human resources of all hues and colours of the organisation and against productivity and profitability through enabling larger number of employees to use their fuller competencies for the organisation.

### Human Resource Planning in Indian Context:

1. **Components of Human Resource Planning and their Relative Importance:** Information collected through questionnaire and personal interactions with the senior executives of the 20 large sample companies in respect of various aspects of human resource planning and their relative importance. It is obvious from the table that human resource planning, as adopted by the companies, included estimating human resource requirements, recruitment planning, planning training and development, career and succession planning, planning improvement in moral and motivation, and planning for productivity improvements.
2. **Practices regarding Planning Components of Human Resources:** The present section deals with the ways and means adopted by the sample companies for strategising important segments of human resource planning.
  - (a) **Estimating Human Resource Requirement:** In our field study it was noted that in all the organisations surveyed, human resource planning process began with developing a profile of the current status of human resources. For this, information about the employees, their education, training, prior employment, current position, performance rating, salary level, languages spoken, capabilities and specialised skills from various departments were collected. One-third of the organisations also generated a separate executive inventory report to get information about individual managers and their positions.

Simultaneously, job analysis was also undertaken by about 90 percent of the companies to determine the jobs within the organisations and the behaviours required to perform their jobs.

After examining the current human resource situation of the company, the human



resource manager attempted to assess the requirements of human resources of the organisation in future. About three-fourths of the companies reported that they tailored the manpower planning system to corporate objectives and strategies and drew up a long-term programme so as to track down people endowed with knowledge and skills best suited to achieving the objectives. Thus, on the basis of the future business plans, human resource requirements of the organisation were determined for a specified period of time. While prognosticating the demand, vacancies arising out of transfer, promotion, job rotation, voluntary retirement, dismissal, discharge or death were also considered.

The field study disclosed that generally four methods were used by the organisations for forecasting demand of human resources, viz., managerial judgement, trend analysis, project-wise estimate and projection based on turnover of manpower.

15 out of 20 sample companies had used managerial judgement method to assess future manpower requirements. These companies included all the five public sector enterprises and ten private sector companies. In managerial judgement method, it was reported by the organisations, that experienced managers were directed by the top management to prepare guidelines for departmental managers, indicating broad assumptions about future activity levels which would effect their departments. Targets were set and desirable changes inflow of work and job designs were also indicated where considered necessary. On the basis of these guidelines, the departmental managers prepared forecasts with the help of personnel and O and M specialists. Simultaneously, the personnel department was also directed to prepare a forecast of the company-wide demand for human resources. Later these two sets of forecasts were scanned by senior executive committee consisting of functional heads to arrive at a final forecast.

- (b) **Recruitment Planning:** As noted earlier, 90 per cent of the companies surveyed accorded high priority to recruitment planning and had adopted integrated approach to manpower requirement for the various reasons stated above. The field study showed that the processes followed consisted of planning for recruitment on on-going basis, project-based recruitments, a mixture of internal as well as outside recruitment and campus recruitment. All the companies in one way or the other adopted the system of planning for on-going recruitments. Secondly, in all the cases, recruitment planning took into consideration potential for internal promotions as well as direct outside recruitment. As many as 90 per cent of the organisations planned recruitment through campus interviews, particularly, for their supervisory and managerial positions. 70 per cent of the companies surveyed reported that they planned their recruitment once they launched a project.
- (c) **Career and Succession Planning:** Career and succession planning is an integral part of human resource planning. In recent years it is being increasingly realised by the corporate management that they can expect to retain their top talents and get the best out of them only by offering the prospect of unhampered growth and accordingly corporates are beginning to plan design and mould their employees. Our investigation shows that majority of the organisations (80 per cent) reported that they had a well



defined career plan for all of their employees. However, the process was highly systematic only in the case of 50 per cent of the cases.

It was also noted that in most of the cases (12 out of 16) career and succession planning was limited to the managerial cadre.

The field study revealed that three methods were used for working out career and succession plans, viz., and talent spotting, studying the past performance and judging future potential and job rotation.

- (d) **Planning, Training and Development Activities:** An overwhelming proportion of the sample companies and their executives (90 per cent) observed that adequate attention was paid to employee growth and development in their company. Two-thirds of these organisations had adopted comprehensive, systematic and continuous training programme linked closely to the strategy with which they were planning to fight in the market place. These organisations believed that training should act as catalyst between people, between strategy and systems, between customers and the organisation.

The practice adopted by the companies participating in the study, varied from organisation to organisation. All the companies had invariably worked out the training and development needs from long-term point of view.

Further, these companies had computerised their training and development requirements. About half of the organisations had emphasised on leadership, empowerment and teamwork aspects of training programme. Senior managers of these organisations were trained to realise that their role was not as much in controlling as in helping to facilitate the natural unfolding of their subordinates' potential. A series of workshops were organised for the purpose.

Another emerging aspect of training and development planning, as noted during the study, was retaining. The senior executives of the six organisations surveyed stated that their thrust in the training programme was on retaining which involved unlearning old concepts and acquiring new skills for workers and managers.

Over two-thirds of the companies made efforts to bring changes in attitudes through training. The companies having not bothered to do so reported that they did not have faith in the philosophy of change in attitudes through training.

In four-fifths of the organisations approached for investigation it was noted that they had systematically planned for creating training infrastructure inside the organisation. In fact, most of them had already some kind of establishments. It was encouraging to find that training and development department of these organisations was equipped with professionals who had high academic attainments and had worked in academic institutions before shifting to industry. Those having no training infrastructure of their own relied on outside agencies for training.

It was revealing to find during the field study that three-fifths of the companies had planned for linking their training and development system with the appraisal system. These companies reported that they had a system of 'Management by Objectives'.



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Thus, the practices of the organisations show the training and development programmes are receiving importance as part of human resource planning system.

- (e) **Planning for Improvement in Morale and Motivation of Manpower:** During the course of the field survey it was noted that there was growing realisation of the fact that morale and motivation level of employees were very significant determinant of the productivity in an organisation.



## PART-C

# Financial Strategies and Strategic Total Cost Management

### Major Contents of Part C:

- Various Financial Strategies
- Different Techniques of Total Cost Management

### Financial Strategies:

Finance is so intimately concerned with everything that takes place in the operation of a corporate enterprise that it would not be appropriate to consider the finance function as separate and distinct from other business functions if comprehensive corporate planning is to be a meaningful concept. However, the financial aspects of corporate planning deserve special consideration because it is one of the major considerations that influences formulation and implementation of corporate strategy. At times, a carefully developed and patently viable scheme has to be shelved because of non-availability of funds.

Although financial strategy may seem to be the last link in the planning chain, it is the backbone of corporate planning system. It provides the basic framework within which the functional plans of an enterprise are developed. It also serves as an integrating element in the corporate planning system. In fact, the very survival of an enterprise, as the following discussions will demonstrate, is facilitated by a prudent financial strategy. The financial strategy of an enterprise encompasses two basic aspects, viz., determination of financial objectives and making strategic decisions.

### Determination of Financial Objectives:

A firm formulates financial strategy to achieve certain financial objectives. The overall objective of financial planning is to garner and utilise capital resources in such a way as to maximise the company's wealth. Although profit maximisation could be regarded as the prime financial objective, it suffers from several drawbacks which render it as an ineffective decisional criterion. Thus, in the first instance, it is a vague concept and does not discriminate between short-term profits and long-term profits. If a financial manager aims at maximising short-term earnings and for that matter, a decision is taken to operate a machine without its proper maintenance, the company in that case can increase its short-term profit by avoiding current expenditures on maintenance of the machine. But owing to this neglect, the machine being put to use may no longer be capable of operating after some time with the result that the firm will have to defray huge investment outlay to replace the machine. Thus, profit maximisation suffers in the long run for the sake of maximising short-term profit. Obviously, long-term consideration of profit cannot be neglected in favour of short-term profit.



Profit maximisation objective does not take cognisance of time value factor and treats all benefits, irrespective of the timing, as equally valuable. For instance, if there are two investment projects and suppose one is likely to produce streams of earnings of Rs. 99,000 in sixth years from now and the other is likely to produce annual benefits of Rs. 15,000 in each of the six years, both the projects cannot be treated as equally useful. Nevertheless, total benefits of both the projects are identical because of differences in value of benefits received now and those received benefits, irrespective of the timing, as equally valuable. For instance, if there are two investment projects and suppose one is likely to produce streams of earnings of Rs.99,000 in sixth year from now and the other is likely to produce annual benefits of Rs.15,000 in each of the six years, both the projects cannot be treated as equally useful. Nevertheless, total benefits of both the projects are identical because of differences in value of benefits received now and those received a year or two years after. Choice of more worthy projects lies in the study of time value of future inflows of cash earnings.

Another short-coming of the profit maximisation objective is that it overlooks the risk factor. Prospective earnings of different projects are related with risk of varying degrees. In view of this, different projects may have different values even though their earning capacity is the same. A project with fluctuating earnings is considered riskier than the one with certainty of earnings. Naturally, an investor would provide less value to highly risky projects as compared to projects with lower risks.

Due to the above-mentioned factors, wealth maximisation has come to be regarded as most suitable and operationally feasible objective of financial planning. This objective implies maximising net present worth of the firm. Net present worth is the difference between gross present worth and the amount of capital investment required to achieve the benefits. Gross amount represents the present value of expected cash benefits discounted at a rate which reflects their certainty or uncertainty. Thus, wealth maximisation objective as a decisional criterion suggests that any financial action which creates wealth or which has a net present value above zero is desirable and should be accepted and that which does not satisfy this test should be rejected.

The objective of wealth maximisation, as discussed above, has the advantage of exactness and unambiguity, and takes care of time value and risk factors. It also maintains financial viability and long-term solvency of the firm, and thus protects the firm's assets.

While maximising wealth of the firm, a finance manager must also ensure sufficient liquidity in the business so that the organisation can satisfy its financial obligations as and when they arise. Besides, financial strategy must be so designed to generate adequate surplus in order to meet cost of capital as well as to provide resources for future growth of business. As such, finance manager should aim at striking satisfactory trade offs between short-term profits and long-term profits, and also between profitability and financial risk.

### **Making Strategic Financial Decisions:**

Financial strategy defines the use of financial resources to implement corporate strategy and outlines courses of action. It enables a finance manager to develop, to specify the optimal development of such resources towards the advertisement, of financial and corporate



objectives under varied strategic situation. Thus, financial strategy has three major dimensions, viz., investment, financing and dividend. These strategic decisions must be made within the parameters of corporate purpose and mission and objective of maximisation of the firm's value. We shall now discuss, in brief, how a finance manager makes various financial decisions.

1. **Investment Strategy:** Investment strategy is the vital aspect of financial strategy. Since funds involve cost and are available in limited quantity, their proper utilisation is necessary to help an organisation to attain its objectives. This calls for making prudent decisions regarding total amount of assets to be held in the enterprise, make-up of these assets and business risk complexion of the organisation, as perceived by investors. Investment decisions consist of decisions regarding capital expenditure projects and current assets.

### Strategic Decisions for Capital Expenditure Projects:

Although investment strategy does not stipulate the specific uses of capital such as product to be sold, sales appeals to be stressed, plans for production and purchasing, decisions to make rather than 'buy' heavy use of automation, etc. as these are determined by other managerial decisions, it lays out the positive direction an enterprise will take. Thus, investment strategy decides the course of action to be pursued regarding allocation of funds to capital expenditure projects. Specific allocation of capital can be made only after creative planning process has generated alternative investment proposals.

In a well managed company planning is not done in isolated bits. Instead, tentative ideas are passed back and forth among departments, alternatives are suggested, rough estimates are provided, and objections are raised while plans are still being formed. A vital part of this give-and-take process is checking on the availability of capital and other resources that each alternative would need. These resources can be provided only if certain conditions are satisfied. Investment strategy aiming at maximisation of firm's value furnishes such conditions. These are in the form of guidelines on how capital should be used and target for financial results. These targets and subgoals derived from them serve as standards to evaluate various competing investment proposals. Strategic decision regarding type of capital assets to be acquired should be made within the boundaries of corporate strategy which, for instance, state which products to be manufactured and which production technology to be used.

**Economic Evaluation of Proposals:** A firm may have a number of capital expenditure proposals in hand within a particular product-market posture but it may find it difficult to take up all of them simultaneously owing to dearth of funds. Financial strategy should, therefore, provide a specific technique with which to choose the most useful proposal for the firm. Capital budgeting is such a technique. Capital budgeting technique is based on the marginal principle wherein marginal revenue from the investment is matched with the marginal cost. Thus, according to this principle, a firm should acquire capital assets if the marginal revenue exceeds the marginal.

Three well-known capital budgeting techniques which are employed for economic appraisal of various investment proposals are Net Present Value, Internal Rate of Return and Pay Back Method. Each technique has its unique application and limitations. Their combined uses have pragmatic value for computing economic viability of various proposals in hand and ranking them.



**Hurdle Rate:** Investment strategy seeking to maximise the firm's wealth must provide for a minimum rate of return that must be earned if a project is to be profitable. Mere evaluation of an investment project and its ranking will not serve the purpose if minimum rate of return is not considered. Acceptance or rejection of a project depends essentially on this minimum rate of return which is also known as hurdle rate of return or cut-off rate.

It is, therefore, necessary that an organisation's investment strategy must state clearly the hurdle rate for different kinds of projects. For example, the firm may stipulate that any new investment in fixed assets must earn at least 20 per cent annually on the initial investment after provision for depreciation and taxes. Any new project yielding less than 20 per cent rate will be rejected. For such a policy to be useful, the method of calculating minimum rate of return should be defined.

Hurdle rate or cut-off rate is determined on the basis of cost of capital. Cost of capital is the minimum rate of return that the company must pay to the suppliers of capital for use of their funds. In order to compute cost of capital, finance manager must determine cost of each type of funds needed by the company. Thereafter these costs of capital should be combined by assigning weights to each cost in terms of the proportion of funds so raised to total funds.

The hurdle rate serves as the standard for acceptance or rejection of projects. Projects having rate of return below the hurdle rate are rejected. However, intangible benefits should also be appraised to decide whether the added advantage is important enough to move a project up into the acceptable list. Similarly, intangible costs of projects above the cut-off point should be assessed with an eye for projects that might be dropped. It is generally observed that the hurdle rate is fixed somewhere above cost of capital, say 10 per cent in this instance. This is done to compensate for the uncertainty involved in calculation of cost of capital. Increased business risk, organisation problems and fear of loss of control through issue of additional equity shares also favour upward adjustment of weighted cost of capital.

Since cost of capital is inexact and is based on several assumptions, it will be very useful if financial strategy spells out clearly the formula to be used and assumptions to be made for calculating cost of capital. Such guidelines may be regarding depreciation, marginal tax rate of shareholders, market price of shares, growth rate interest rate, brokerage and underwriting commission, etc.

**Capital Rationing:** Choice of investment proposals is further influenced by capital rationing policy of the firm. Capital rationing policy sets limits to the firm's planned investment for a specific year based on the amount of cash available. Under capital rationing, finance manager would accept projects arranged in descending order of their profitability for as long as it takes for the budget to be exhausted. The problem arises if the budget limit hits the middle of one project. In that case a search process would be required. In the state of capital rationing, a firm should accept several smaller but less profitable projects to allow fuller utilisation of the capital budget instead of accepting one big project with relatively high yield that leaves a portion of the budget utilised. This course of action will help the firm to maximise profitability.

**Classification of Projects:** Classification of capital expenditure projects by purpose and usage establishes another selection criterion. According to the purpose, projects can be categorised into three major groups: (a) Social investments involving government-required projects for



health, safety and pollution control, (b) Cost improvement investments consisting of equipment for new products, new plants and new facilities. Investment limits are usually stipulated for these categories.

According to usage, investments can be categorised into four groups:

- (a) Mutually exclusive projects comprising those proposals which represent alternative methods of doing the same job,
- (b) Independent projects consisting of all such proposals as are being considered by the management for performing different tasks in the organisation,
- (c) Contingent projects involving certain projects whose utility is contingent upon acceptance of others and
- (d) Replacement projects comprising those projects which are being contemplated for replacing the old and antiquated equipment so that the same job could be performed more efficiently. Each project is evaluated vis-à-vis other competing projects and then the final decision regarding allocation of funds to a particular project is taken.

**Risk Factor:** Risk factor should also be given due consideration while taking decision regarding investment in capital assets. Investment decision is always exposed to risk because of uncertainty of amount of gains that will be available from a project. In order to deal with investment risk, it is necessary to construct probability distribution of cash flows of a project and compute standard deviation and coefficient of variation. Other advanced techniques such as sensitivity analysis and stimulation approach can also be employed for measuring risk. On the basis of this risk analysis, different projects can be classified as highly risky, moderately risky, low risky and minimum risky.

A company can either set a minimum acceptable return for each risk class of the predicted result of an investment can be multiplied by the appropriate discount factor to obtain an “expected return”. Since a lot of subjectivity is involved in determining the discount factor for different categories of risky projects, it will be useful if clear-cut guidelines are given about hurdle rate for each class or risky projects say 10 per cent for minimum risk projects, 15 per cent for low risky, 20 per cent for moderately risky and 25 per cent for highly risky projects.

### Strategic Decisions for Current Assets:

Strategy for current assets sets out methodology of allocation of funds among cash, receivables and inventories. Strategic decisions in this regard are essentially influenced by trade-offs between liquidity and profitability. Any compromise between these two conflicting goals of liquidity and profitability regarding short-term investment decisions usually rests on the risk preferences of the management. In the following paragraphs, we shall discuss how strategic decisions are made about cash, inventories and receivables.

### Strategy for Cash Management:

**Cash Management Strategy:** Cash is a strange current asset of a firm. It is strange because a firm seeks to receive cash in the shortest possible time but does not retain it for a long period in



order to avoid any additional cost to the firm. Adequate cash enables the firm to pay trade bills readily and take advantage of trade discounts. In addition, it satisfies unexpected adversities and is useful for exploiting favourable opportunities that may come along time and again. Furthermore, a firm with a strong cash position enjoys high credit standing. However, keeping any excess stock of cash is largely a waste of resources because it is a non-earning asset and the same could be invested elsewhere to earn some income. This implies that the firm will be failing to maximise its profits at the expense of high liquidity. If more and more cash is put to profitable use, the company's liquidity will be impaired causing the firm to sacrifice benefits of cash discount, liberal lending facilities from financial institutions and easy supplies from reputed suppliers. Thus, the dilemma between liquidity and profitability sets in. Suitable cash strategy has, therefore, to be formulated to resolve the problem. A good cash strategy delineates courses of action in the determination of optimal level of cash, conservation and investment of idle cash.

Each of these aspects will be dealt with in the following paragraphs:

**Cash Projection and Planning:** A cash planning exercise is undertaken to estimate the amount of cash needed for different purposes so that a business enterprise neither has surfeit of cash nor paucity of it. If cash inflows and cash outflows were perfectly synchronised and could be forecast with certainty, a company would need no cash balances at all. Since such an ideal situation does not exist at all, finance manager must undertake the cash planning exercise. A business enterprise carries stock of cash primarily for transaction purposes and builds secondary reserves (highly liquid risk-less securities) to meet precautionary and speculative motives.

With the help of cash budget finance manager can predict inflows and outflows of cash during some future span of time and thereby determine cash requirements of the company. In the light of various factors influencing amount of cash holdings such as terms of purchase and sale, collection period of receivables, credit position of the enterprise, company's production policy, nature of demand of company's product, etc. appropriate level of cash represents the level at which the company has to resort to additional borrowing of cash or to liquidate a part of its investment portfolio. It will, therefore, be equal to the total of transactions balance plus the safety stock necessary to satisfy precautionary requirements.

Another technique used to determine optimal level of cash holding is the Economic Order Quantity (EOQ) model. According to this model optimal level of cash is one where total cost (carrying cost + acquisition cost) is minimum. The formula to ascertain this level is:

$$Q = \frac{2CB}{K}$$

Where Q = Optimum size of cash inventory

C = Average cost of acquisition

B = Total amount of transaction demand

K = Cost of carrying cash inventory, i.e., interest rate on marketable securities for the period involved.

The major limitation of this model is that it assumes a constant rate of cash inflow and outflow per period. Where the situation is expected to be steady, this model is applicable. However,



where cash flows are of stochastic nature, the model may not be very useful. For such situation, Miller and Orr have developed a model known as the “stochastic model”.

The stochastic model prescribes two control limits – upper limit and lower limit. When cash balances reach the upper limit (h), a transfer of cash to investment account should be made and when cash balances reach the lower point (i), a portion of investment should be liquidated to return the cash balance to its return point (z). The model prescribes the following formula to ascertain these control limits:

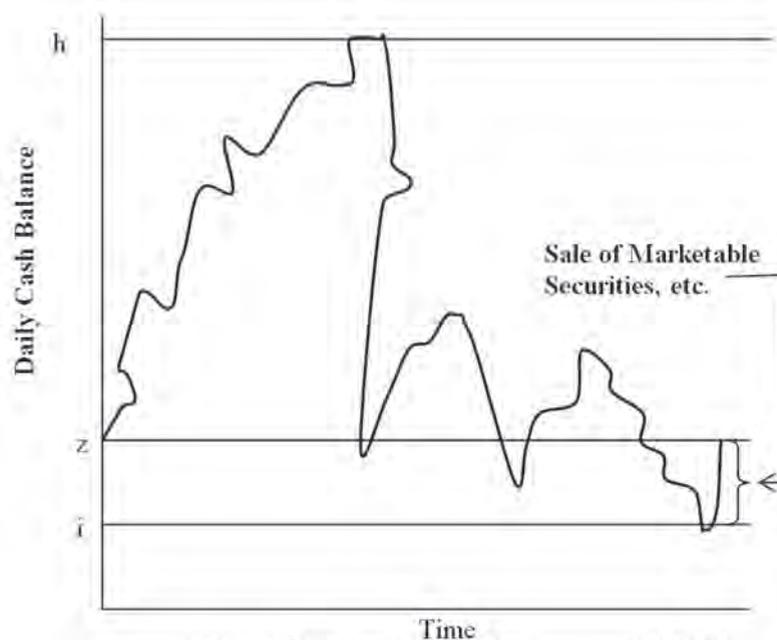
$$Z = 3 \sqrt{\frac{2B^2}{4K}}$$

Where Z = Normal level of cash

$b^2$  = Fixed cost associated with a security transaction

= Variance of daily net cash flows

K = Interest rate per day on marketable securities.



**Fig. Miller-Orr Cash Management Model**

The optimal value of ‘h’ (upper limit) is simply three times of ‘Z’. The above figure exhibits the model.

### Strategy for Cash Conservation:

For effective utilisation of cash a number of strategies have to be developed. These may fall in two broad categories: (a) strategy towards accelerating cash inflows; and (b) strategy towards decelerating cash outflows.

A number of methods such as quick deposit of customers’ cheques, establishment of collection



centres at different places, lock box method, etc. can be employed to speed up the cash inflows and maximise available cash resources. The overall purpose of these methods is to shorten the time lag between the moment a payment to the company is mailed and the moment the funds are ready for redeployment by the company. In formulating strategy in this respect cost-benefit analysis of each of the methods must be made. If the benefits are more than the cost, management should adopt the device.

Strategy should also be formulated to slow down the speed of cash disbursements. This will also optimise cash availability in the company. There are several devices such as delaying outward payment on bills until the last date of the no-cost period, playing float, making payroll periods less frequent, payment from decentralised locations which can aid the organisation in delaying payments. Suitable operating procedures detailing methods of cash payments, cash discount, due dates of payments, float (difference between the company's cheque book balance and the balance shown in the Bank's accounts), payment schedule, etc. should be established.

#### **Strategy for Investment of Idle Cash:**

Suitable policy regarding investment of idle cash balance should be established. Owing to recurring seasonal variations in accounts receivable and inventory, unpredictable financial requirements, and methodology adopted for managing cash, a company may have idle cash for sometime. The idle cash should be invested so as to earn reasonable amount of income without foregoing liquidity. Suitable investment policy for guidance of managers regarding deployment of cash in securities, selection of securities for investment portfolio and the principles that would govern this selection, diversification of investments in terms of securities, units, industries and geography etc. should be established. While formulating portfolio policies, risks involved in and return expected from investments in marketable securities are to be balanced.

#### **Strategy for Inventory Management:**

Inventory represents by far the largest portion of current assets in a business organisation. Accordingly, accomplishment of profit maximisation goal of an enterprise calls for efficient management of inventories. Efficient inventory management calls for minimisation of investments in inventory and meeting the demand for different types of inventory efficiently and effectively and adequately so as to minimise the direct and indirect costs of holding inventories, minimise the risks and losses due to stock out and to keep the investment in inventories at a reasonable level.

Determining optimal size of inventory is a very important strategic decision which a finance manager has to take for planning and controlling inventories. This decision necessitates resolution of conflicting goals. A larger inventory ensures uninterrupted production and minimises cost of production interruptions caused by inadequate inventories and risk of loss of profit owing to loss of sales and possible purchase discounts and so on, but it accompanies high inventory carrying costs of production due to frequent production interruptions and also cost of being out of stock. Thus, by determining the right amount of inventory against the cost involved in carrying this amount of inventory management should formulate a suitable inventory policy specially stating minimum inventory, size of production run or purchase order, timing of reordering and inventory turnover.

**Policy Regarding Minimum Inventory:**

If inventory is to be carried, a company must establish some general rule to assist purchase and production departments in determining how much inventory to have on hand at any time. A general rule for finished merchandise is that the stock level at which replacements will be ordered should approximately equal the sales of that merchandise during the period required for replenishment. Thus, for stock that can be replenished within two weeks, the reordering point would be approximately two weeks sales. If it takes three months to procure new inventory, then the minimum at which orders should be placed would be correspondingly higher. The same general idea can be carried back into the inventory of raw materials. Of course, the rule does require estimates of future sales and of the speed of procurement, and these may be quite unstable.

Since it is very difficult to predict fluctuations in demand, it is customary to add a reasonable margin of safety to any such reordering point as a protection against contingencies. The size of the safety margin will depend upon the likelihood of delays in getting replacements and the seriousness of the delay to production operations or customer service. These considerations may influence many firms to follow a policy of carrying a minimum inventory much higher than what strict interpretation of the replenishment rule requires.

**Size of Production Run or Purchase Order:**

When reordering is necessary, the question is how much should be ordered. Primary considerations are the cost of carrying inventory and economical production runs in a company's own plant and quality discounts offered by vendors. Policy regarding size of purchase orders may be stated in total quantities or in so many weeks or months supply. The order standards for specific items may be computed, giving effect to economy of large lots, cost of storage perishability and obsolescence, and related factors.

**Policy Regarding Timing of Reordering:**

While establishing policy regarding timing of reordering, a finance manager should consider certain factors such as customer requirements for specially designed merchandise or for prompt deliveries of standard merchandise, economies possible from larger production runs, cost involved in carrying goods in inventory, accuracy with which price changes may be predicted and accuracy production of the volume and nature of products demanded at a subsequent period of time.

**Policy of Inventory Turnover:**

For controlling the level of inventory and minimising cost of carrying inventory, a company should establish a policy for inventory turnover. Prescription of the turn-over standard creates pressure for the disposal of slow-moving, obsolete stock since accumulation of such stock is likely to lead to future losses. Further, high inventory turnover increases the company's exposure to price fluctuations. On the contrary, low inventory turnover improves the company's credit standing in the eyes of investing public.

For internal administration, separate turn-over ratios for raw materials and finished goods, perhaps broken down according to type of product, would be more useful than a total composite figure.



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## Strategy for Receivable Management:

The Prime objective of receivable management is to maximise value of the enterprise by striking a mean between liquidity, risk and profitability. Credit sale is a marketing device to bolster up the sales and thereby increase profits. However, grant of credit is not cost free. The major costs associated with dispensation of credit facilities and collection of accounts receivables are cost of investigating credit worthiness of parties, cost of collecting receivable, cost of delinquency and opportunity cost, i.e., cost on use of additional funds required to finance credit sales which in turn could be profitably employed elsewhere. Finance manager must watch these additional costs with incremental benefits emanating from increased sales due to extension of credit facilities and then decide whether to grant credit or not. Suitable credit and collection policies should, therefore, be established.

**Formulating Credit and Collection Policies:** While formulating a credit policy for the firm, the top management should lay down specific guidelines regarding quality of trade accounts to be accepted. With the help of incremental analysis of cost and earnings, finance manager should strive to determine credit standards for the firm. Incremental earnings arising from increased sales due to liberalisation of credit facilities must be matched with incremental costs. It would tend to be profitable for the firm to accept accounts up to the point where expected revenue equals the variable cost of goods sold plus cost of investigation and collection of accounts. This has to be compatible with the marketing strategy of the firm.

Guidelines must also be laid down regarding credit terms. Credit terms specify length of credit period and size of cash discount offered for quick payment. There is no legal restriction on a firm to set terms of sale. The firm can fashion its own terms and use them as a dynamic instrument in its bid to stimulate sales. But freedom to determine the terms of credit is constrained by the customs of an industry. Each trade has its customary terms of credit which frequently dictate the nature of credit terms to be offered by a firm. The competitive pressures also compel a firm to have uniformity in cash discount and credit period. Credit terms should, therefore, be designed keeping in view the major marketing objective and cost-benefits implications. Thus, to decide whether to lengthen credit period, finance manager should match incremental costs with incremental earnings. He should strive for locating that period where additional earnings equate additional costs. This would be an optimal period. Similarly, while deciding about extension of discount facilities and its rate, incremental earnings resulting from investment of funds released by reducing the level of receivables must be matched with cost of discount. Specific policy regarding seasonal daring's should also be laid down. In seasonal daring's, customers are sold goods without being required to pay until sometime to come. Specific guidelines in this respect will also be useful.

Proper management of receivables also calls for designing an appropriate collection policy for the firm. The basic objective while formulating the collection policy is to ensure the earliest possible payment on receivables without any customer losses through ill will. Prompt collection of accounts tends to reduce the investment required to carry receivables and costs associated with it. Percentage of bad debts is very likely to decrease. A firm with long due accounts will be exposed to greater amount of risk of non-payment. In designing collection policy for the firm, finance manager must match level of collection expenditures with opportunity saving on reduced investment, in receivables and bad debt losses.



**Policy Regarding Credit Evaluation:** More determination of a suitable credit policy for the firm will not help accomplish the overall objective of minimisation of investment in receivables and reduce bad debt losses unless credit worthiness of applicants is evaluated to ensure that they conform to the credit standards prescribed by the firm. There should be clear-cut guidelines regarding the criteria to be followed while evaluating the credit worthiness of an applicant. Which aspect should receive greater stress in credit analysis must find place in the policy statement for guidance to credit officers.

For controlling accounts receivable, turnover ratios should be set to check the defaulters of account and to avoid further losses from an accumulation of uncollectable accounts. Even more detailed constraints, such as “ageing” the accounts receivable (i.e., listing those 30 days overdue, 60 days over due etc.) move from general financial limitations into operations.

### **Financing Strategy:**

An important task of the central management is to see that the capital necessary to execute the corporate strategy is provided at a reasonable cost and with minimum risk. In financing strategy, a finance manager has to decide about the optimal financing mix or make up of capitalisation in order to maximise earning per share and so also market value of shares. This involves detailed examination of some of the following vital factors:

1. What sources of long-term funds should be tapped and in what proportion?
2. To what extent should long-term debt be resorted?
3. Should the firm take recourse to lease financing?
4. Should the firm employ trade credit as a means of financing and if yes, to what extent?
1. **Capital Structure Strategy:** Capital structure strategy provides framework for the makeup of a firm’s long-term financing of debt, preferred stocks and equity stock. The central thrust of this strategy is on minimisation of cost of capital and maximisation of value of stocks. In formulating capital structure strategy for the firm, some fundamental financial principles, namely, cost, risk, control, flexibility and timing should be kept in view. According to the cost principle, ideal pattern of capital structure is one that tends to minimise cost of financing and maximise earning per share. From this angle, the debt should occupy a prominent place in the capital structure of a firm because it is the cheapest source of financing. The risk principle suggests that such a pattern of capital structure should be devised so that the firm does not run the risk of bringing on a receivership with all its difficulties and losses. Since a bond is a commitment for a long period, it involves risk. If income of the firm declines to such a low level that debt cannot be serviced, the bondholders in that case may foreclose and consequently, equity stockholders may lose part of all their assets. As against this, equity stock does not entail any fixed charges nor is the issuer under any legal obligation to pay dividends. The firm does not incur risk of insolvency. Thus, the risk principle places relatively greater reliance on common stock for financing capital needs of the firm.

Finance manager should also consider the control principle. He has to choose a pattern that does not disturb the controlling position of residual owners. The use of preferred stock



and also bonds offer a means of raising capital without jeopardising control. Management desiring to retain control must raise funds through bonds, since equity stock carries voting rights, issue of new equity shares will dilute control of existing shareholders. The control principle, therefore, suggests that issue of equity shares should be avoided.

According to flexibility principle, an enterprise should strive toward achievements of such combination of securities which the management finds it easier to manoeuvre sources of funds in response to major changes in need of funds. Not only several alternatives are open for assembling required funds but the bargaining position of the firm is also strengthened while dealing with supplier of funds. For example, if a company is top heavy with debt and has mortgaged all its fixed assets to secure presently outstanding debt, it may subsequently find it difficult to obtain any loan further even though the market condition in respect of availability of debt is favourable because lenders feel shy about lending money to such a highly risky company. Accordingly, the company might be compelled to raise equity share capital at a time when there is scarcity of such capital in the market. Thus, for the sake of maneuverability the company should not assume more debt. Further, the management should, as far as possible, avoid getting cheaper loan on terms and conditions that limit the company's ability to procure additional resources.

Thus, we find that principles determining the choice of different sources of capital funds are antagonistic to each other. For instance, cost principle supports induction of additional doses of debt in the firm which may not be favoured from the risk of bankruptcy. Similarly, the control factor strongly supports the issue of bonds but the maneuverability factor discounts this step and favours the issue of common stock. Thus, to formulate appropriate strategy of capital structure of the company, finance manager has to bring about a satisfactory compromise among these conflicting principles. This compromise is to be reached by assigning weights to these principles in terms of economic and industrial characteristics as also in terms of specific characteristics of the company.

- 2. Debt Strategy:** Determination of optimal level of debt is one of the most crucial but difficult decisions which a finance manager has to make. Because of tax deductibility of interest payments, use of financial leverage (i.e., use of fixed cost fund in long-term financing) increases the potential earnings of the owners. However, the firm is required to bear increasing costs – explicit and implicit – in borrowing funds owing to increased financial risk. Upto a certain limit tax benefits of leverage tend to be higher than the costs associated with debt financing. Beyond that limit cost of debt begins to outweigh the tax benefits. Debt limit should be fixed at this point because total value of the firms stops rising with leverage. Economists call this level as optimal level of debt. The finance manager has to find this level. Decision in this regard involves a trade off between opposite factors of risk and return.

There are number of techniques that can help a finance manager to resolve this problem. None of these approaches can be considered satisfactory in so far as the determination of optimal level of debt is concerned. However, they equip the finance manager with adequate information for making a rational decision.

EBIT-EPS analysis is one of the widely employed methods to determine the most appropriate level of debt. Through this analysis finance manager seeks to compare alternative methods



of financing under various assumptions regarding EBIT and obtain indifference level of leverage. Indifferent point refers to the EBIT level at which EPS remains unchanged irrespective of debt-equity mix. Given the total amount of capitalisation and interest rate on bonds a firm reaches indifference point when it earns exactly the same amount of capital which it has promised to pay on debt.

Another potent tool for comparing financing alternatives is to compute Coverage Ratios.

They provide a measure of safety of interest payment or whatever specific commitment is being made. They prescribe the limit up to which debt can be resorted to without endangering the solvency of the firm. The coverage ratio is computed by dividing EBIT by interest charges.

By comparing the firm's debt-equity ratio with industry norms, suitable level of debt can be determined. If on comparison, the management finds that it has lower proportion of debt to total capitalisation in relation to industry average, it can raise further debt so long as its own ratio is equal to the average ratio.

**Refunding:** Another strategy aspect of long-term debt is refunding of debentures. Refunding is the device of substituting old bonds by new bond issue. Before deciding about refunding on outstanding bonds a finance manager must determine whether or not refunding is profitable. For this, he must match cost of refunding with receipt resulting from it. It is only when receipts exceed costs; he should proceed with refunding operation. Redemption is another device of avoiding the deleterious effects of debt or to eliminate debt with unduly restrictive covenants. Redemption is the actual paying off the debt represented by bond. This is possible only when bond issue contains all privilege giving the firm the option to buy back the bonds at a stated price before their maturity. The bond indenture provides the prices which a firm will pay to the bondholder for a bond called for redemption before their maturity. Generally, this redemption price is greater than the par value of bond. The actual price is set after taking into account par value of the bonds plus a reasonable premium.

The management may sometimes convert bonds into stocks in order to get rid of bonded indebtedness and the fixed obligations associated with it. The conversion is exercised generally at the opinion of the bond holders. However, the company may force conversion at a time when it is more profitable for bondholders to convert rather than surrender the bonds and receive cash. Before deciding about conversion, finance manager must examine the impact of the transaction on the market value of the stock as the decision criterion.

- 3. Strategy on Lease Financing:** Leasing is an arrangement under which a company acquires that right to make use of an asset without holding the title to it. Since leasing represents an alternative to ownership, it can be regarded as a specialised means of gathering funds. In exchange for use of the asset, a company can issue a claim against its future cash flows, long-term debt, equity or lease obligations. Viewed in this sense, leasing is strictly a financing decision.

The leasing decision involves choosing between leasing and owning for the purpose of securing the senders of fixed assets. This calls for comparison of financial costs of borrowing necessary funds to purchase assets. If cost of the leasing is found higher than



cost of borrowing, it would be in the interest of the firm to buy the asset and borrow for it. The leasing strategy should be formulated after evaluating the two alternatives, i.e., leasing and borrowing. The evaluation process consists of seven steps, namely, calculation of savings for investment allowance, calculation of after-tax cost of owning, calculation of after-tax lease cost, calculation of present value of cost of owning and leasing, and comparison of present value of owning cost with present value of leasing.

**Formulating Dividend Policy:** Dividend decision should be formulated in such a way as to optimise price of the firm's share in the market. The split between retention and dividend should be such as to attract potential investors and raise the market price to the highest attainable level. In formulating a policy regarding determination of amount of dividends to be paid out to the stockholders, careful consideration of a myriad of factors is necessary. The management should bear in mind environmental factors such as general condition of economy, state of capital market, state regulation and tax policy. If there is a depression in economy, the management may withhold dividend payments to retain larger income in order to preserve the firm's liquidity position in all times.

During periods of prosperity, the management may not always be liberal in dividend payment although earning power of the firm warrants it. This may be due to the management's inclination to exploit attractive investment opportunities which crop up during times of prosperity. Similarly, if the state of capital market is relatively comfortable and raising funds from different sources poses no problem, the management may be tempted to declare high dividends to maintain the confidence of existing stockholders and attract potential ones. But in the event of decline in the stock market when investors are indifferent towards buying securities, the management should adopt a strict dividend policy to tide over the current financial turmoil. Management should also keep in view rules and regulations.

A number of internal factors such as company's investment opportunities and stockholders' preferences, stability of earnings, growth rate, access to capital market, liquidity position of a company and its fund requirements, repayment of debt, restrictions in debt agreements and control should also be kept in mind while deciding dividend rate. Thus, a company with an array of profitable investment opportunities in hand and stockholders having strong preference for long-term gains have no alternative but to retain larger portion of earnings to finance investment projects. However, management will be in dilemma if the company has a number of potential investment proposals but stockholders have a strong preference for a dividend income. In such a situation, it is necessary to balance the net preference of stockholders against differential cost of retained earnings and net stock financing before deciding about the dividend rate.

Size of dividend is affected by stability of earnings. A company with stable level of earnings will pay stable dividend. The principle of conservation need not be followed by such a company. In contrast, a company with fluctuating earnings must retain a larger share of income during boom periods in order to ensure that the dividend policy is not affected by the business cycle.

A company's growth fate is influenced by the dividend decision. Hence, the growth factor should receive a due attention from the management while taking dividend decision. A rapidly growing concern will need a regular supply of long-term funds to seize upon favourable opportunities and for that purpose it may find it expedient to finance a greater part of its expansion. Therefore, strategy of such company will be to keep dividend at a minimum level.



The easier and inexpensive access of the company to capital market sources may intimate the management formulate a liberal dividend policy to pay a sizeable portion of the income. However, if the company's access to external sources of financing is limited and costly, management's strategy should be to restrict dividend payments in order to retain larger earnings for financing profitable projects.

A finance manager must also consider cash position of the organisation. An enterprise with high profitability and large reserves may not necessarily have sufficient cash balance to pay cash dividends particularly when most of the sales have been affected through credit and/or the company's cash balance has been seriously depleted through expansion of current or fixed assets or through reduction of its liabilities. In such a situation, it would be unwise to drain off additional cash by paying dividends. Even if the company's cash position is comfortable but it needs cash to repay bank loan and/or to buy raw materials for production purposes. A prudent manager would not impair the liquidity position of the company for the sake of maintaining regularity in dividend payment, though, of course, the latter is also important. A company desiring to repay its past debts may adopt strategy of retaining larger portion of the earnings.

Finance manager should also give due consideration to restrictions contained in loan agreement with lenders. There may be a dividend agreement which may either prevent payment of dividends entirely or limit the amount of dividend to be paid or disallow payment of dividend until certain conditions are fulfilled. It would, therefore, be desirable for a finance manager to study minutely the provisions of debt agreements before taking dividend decision.

Control is another vital factor that influences the pattern of income distribution. Issue of additional equity stocks for procuring funds dilutes control to the retirement of the stockholders who currently dominate the company. At the same time, recourse to debt may entail financial risk in the company and may at times lend to death knell of the enterprise which is again deleterious to the stockholders' interest. Accordingly, present owners desire to maintain control dictates the policy of withdrawing dividend payments to build up funds for growth and other purposes.

**Choosing Form of Dividend:** In developing a dividend strategy, a company can choose from among five options, namely, regular cash dividends, regular and extra cash dividends, cash and stock dividends, consistent use of stock dividends to conserve cash and adjust capital structure, and no dividends at all. In choosing the most suitable form of dividend policy, finance manager must consider factors such as profitability and liquidity position of the company and its funds requirements, investors' preferences and availability of investment opportunities.

Many types of financial analyses provide useful aids for strategic decision making.

Financial ratio analysis, which is a useful starting point for investigating the financial condition of an organisation. Financial analysis is useful, most obviously, in the strategic control stage of the strategic management process, when top managers assess the bottom-line financial results of their earlier strategic decisions. However, financial tools can provide powerful help at other stages of the process. During environmental analysis, financial tools can contribute to SWOT analysis, as top managers attempt to quantify and evaluate the strengths and weaknesses of their firm in relation to those of its competitors, and to assess market opportunities and



threats. At the strategy formulation stage, financial tools such as break-even and net present value analysis help managers to assess the comparative merits of different potential strategies. During strategy implementation, early-stage financial analysis can often signal the need for corrective action or change. In addition, the finance function provides essential analytical tools to the other core functions—marketing and operations. In marketing, for example—financial analysis helps drive decisions about alternative distribution channels or packaging. In operations, assessments of alternative investments in plant and equipment draw upon net present value analysis and similar techniques.

These points underscore the importance of viewing an organisation's operations through a cross-functional lens. In the 1990s the speed of strategic actions is critical, and a firm can enjoy great benefits if it effectively integrates its functional specialists in the strategic management process and resists outdated notions about keeping functions separated, each behind its own wall.

### **Financial Ratio Analysis:**

A useful starting point in analysing an organisation's financial condition is to perform a financial ratio analysis. A financial ratio analysis is based on information provided in the organisation's balance sheet and income statement. These two financial statements are frequently included in strategic management cases, and performing a financial ratio analysis is a convenient way to gain insight into the condition of the firm. In this section, we first review the balance sheet and income statement and then propose a four-step process for performing a financial ratio analysis.

Performing a financial ratio analysis can be divided into four steps:

- (1) Choosing appropriate ratios,
- (2) Calculating the ratios,
- (3) Comparing the ratios and
- (4) Checking for problems and opportunities.

We will discuss each of these steps in turn.

**Choosing Appropriate Ratios:** The many types of financial ratios include liquidity ratios, leverage ratios, activity ratios, profitability ratios, growth ratios, and valuation ratios. All have important uses in evaluating the financial well-being of an organisation. Though strategic managers may use all of these types of ratios, some of them are very specialised, and applying them in a meaningful way requires an extensive financial management background. However, there are several types of financial ratios that should be applied routinely in analysing any strategic management case that includes financial statements. These types—the liquidity, activity, and profitability ratios—are especially useful for uncovering symptoms of problems in cases and for supporting both arguments about the major issues in the cases and proposed solutions. Each of these types includes many ratios; we will discuss only a few of the most useful ones.

**Liquidity Ratios:** One of the first financial considerations to consider when analysing a strategic management case is the liquidity of the organisation. Liquidity refers to the ability of



the organisation to pay its short-term obligations. If the organisation cannot meet its short-term obligations, it can do little else until it corrects the problem. In other words, a firm that cannot meet its current financial obligations must resolve the problem before long-term strategic planning can be effective.

The two most commonly used ratios for investigating liquidity are the current ratio and the quick ratio (or acid test ratio). The current ratio is found by dividing current assets by current liabilities. It measures the overall ability of an organisation to meet its current obligations. A common rule of thumb is that the current ratio should be about 2:1, although what is acceptable depends greatly on the industry and the situation.

The quick ratio is determined by subtracting inventory from current assets and dividing the result by current liabilities. Because inventory is the least liquid current asset, the quick ratio gives an indication of the degree to which an organisation has funds readily available to meet short-term obligations.

A common rule of thumb is that the quick ratio should be at least 1:1, although, again, the appropriate level depends on the industry and the situation.

**Activity Ratios:** Activity ratios, also called asset management ratios, investigate how well the organisation handles its assets. For strategic management purposes, two of the most useful activity ratios measure inventory turnover and total asset utilisation.

**Inventory turnover:** It is determined by dividing sales by inventories. If the firm is not turning over its inventory as rapidly as it has in the past, or as rapidly as other firms in the industry, it may have a problem. Perhaps it is tying up too much money in unproductive or obsolete inventory, or it is not marketing its products as well as it has in the past.

A second useful activity ratio is total asset utilisation.

**Total asset utilisation:** It is calculated by dividing sales by total assets. It measures how productively the firm has used its assets to generate sales. If this ratio is well below the industry average, management may not be using company assets effectively.

**Profitability Ratios:** The profitability of an organisation is an important measure of its effectiveness. Although financial analysts suggest that a firm's goal is to maximise shareholder wealth, profitability is a common yardstick for measuring success. Two key profitability ratios are profit margin on sales and return on investment (ROI).

**Profit margin on sales:** It is calculated by dividing earnings before interest and taxes (EBIT) by sales. Serious questions about an organisation should be raised if this figure is declining over time or is well below the figures for other firms in the industry.

**Return on investment:** It is calculated by dividing earnings after taxes (EAT) by total assets. This ratio is also called return on assets, and earnings after taxes are sometimes referred to as profit after taxes, net profit, or net income. This ratio gives an indication of how productively the organisation has acquired, used, and managed assets. Return on investment is a commonly discussed measure of corporate performance.

### Comparing Ratios:

We cannot overemphasise the statement that no single ratio has meaning by itself. In other



words, comparing ratios is critical for effective financial ratio analysis. Ratios can be compared across time for the same firm, compared with those of similar firms in the industry, or compared with industry averages. The following examples illustrate each of these different types of comparisons.

### Break-Even Analysis:

Break-even analysis is a simple method for investigating the potential value of a proposed investment. It is useful in the analysis of three important types of strategic management decisions:

1. In new product decisions, break-even analysis can help determine how much of a new product a firm must sell to achieve profitability.
2. Break-even analysis can be used as a broad framework for studying the effects of a general expansion in the level of a firm's operations.
3. When the firm is considering modernisation and automation projects where it invests in more equipment in order to reduce variable costs, particularly the cost of labour, break-even analysis can help managers analyse the consequences of the action.

**Break-even Point:** Break-even point is the level of sales, stated in either units or dollars, at which a firm covers all costs of investing in a project. In other words, it is the level at which total sales revenue just equals the total costs necessary to achieve those sales.

### Net Present Value Analysis:

A detailed treatment of net present value analysis is beyond the scope of this text. Even so, we should review, in general terms, its use in strategic management analysis. Net present value analysis can be used to investigate the value of a proposed investment to an organisation or to compare alternative investments to determine which is better from a financial point of view. In order to calculate the net present value of an investment, the analyst needs several figures. First, the total initial cost of the investment must be determined. This includes all payments made today to begin the project. Second, the firm's cost of capital must be estimated. The cost of capital is often given in cases for which net present value analysis is appropriate. If not, one can estimate using methods suggested in financial management texts. Third, the project's expected life must be determined. Fourth, the net cash flows from the project must be estimated.

**Net Cash Flows:** Net cash flows are the net amounts (cash inflows minus cash outflows) that the firm receives from the project each year; they include earnings after taxes (net income) and depreciation. The basic equation for calculating net present value is:

$$NPV = \frac{NCF_1}{(1+K)^1} + \frac{NCF_2}{(1+K)^2} + \dots + \frac{NCF_n}{(1+K)^n} - 1$$

where

NPV = net present value

NCF = net cash flows each year of the project's life



$I$  = total initial investment

$k$  = cost of capital

This equation states that the net present value of an investment is equal to the net cash flows discounted at the cost of capital, minus the initial investment outlay.

## Strategic Total Cost Management:

### Just-in-time (JIT):

A JIT approach is a collection of ideas and philosophy that streamline a company's production process activities to such an extent that waste of all kinds' viz. material and labour is systematically driven out of the process. Just in Time Technique enables a company to ensure that it receives products/spare parts/materials from its suppliers on the exact date and at the exact time when they are needed.

JIT refers to a system in which materials arrive exactly as they needed.

With a JIT system a company must ensure that it receives materials from its supplier on the exact date and at the exact time when they are needed. For this reason the purchasing staff must investigate and evaluate every supplier, eliminate those that could not keep up with the delivery dates.

The steps involved are:

**Supplier Evaluation:** The Purchasing Department must evaluate and investigate every supplier and eliminate those who could not keep up with the delivery dates.

**Supplier Assistance:** The engineering staff must visit supplier sites and examine their processes, not only to see if they can reliably ship high-quality parts but also to provide them with engineering assistance to bring them up to a higher standard of product.

**Supplier Information System:** The firm must install a system, which is as simple as a fax machine or as advanced as an electronic data interchange system or linked computer systems, that communicates with suppliers as to exactly how much of specified parts are to be sent to the company.

**Direct Delivery:** Deliveries should be sent straight to the production floor for immediate use in manufactured products, so that no time spent in inspecting the parts for defects. Drivers, who bring supplies of materials, drop them off at the specific machines that will use the materials first.

This can be illustrated with the example of three machines. Parts are first processed by machine, A which feed to machine B. Then B processes these parts and then C. Kanbans are located between the machines. As long as Kanban containers are not full the workers at machine A continues to produce parts placing them in Kanban container. When the Kanban container is full, the worker stops producing and recommences when a part has been removed. A similar process applies between the operation of machine B and C. This process can result in idle time to a certain extent within the cell, but the JIT philosophy is based on the thinking that it is more beneficial to absorb short run idle time than adding inventory during these periods. During idle time workers perform preventive maintenance on their machine.



Long set-ups and operation time involve indirect costs like product obsolescence, inventory carrying costs, and many defective products (because problems may not be discovered until a large number of items have already been completed).

This problem will be resolved under JIT by adopting the following steps:

- Test data: A videotape of a typical set is prepared for analysis purposes.
- Evaluation: A team of industrial engineers and machine, users examine this tape, spotting and gradually eliminating steps that contribute to a lengthy set-up.
- Motion and time Study: By eliminating unnecessary production steps and improving others after a number of iterations, it is possible to achieve substantially lower set-up times than before.

Effects: Reduction in set-up time has the following effects:

- Reduction in the amount of work-in-process,
- Reduction in the number of products that can be produced before, defects are identified and fixed, thereby reducing scrap costs.

#### **JIT approach for reducing WIP inventory:**

At times, there may be huge differences between the operating speeds of different machines. This affects cost in following manner:

#### **Work-in-process inventory builds up in front of the slowest machines.**

Defective parts produced by an upstream machine may not be discovered until the next downstream machine operator finds them later. By that time, the upstream machine may have created more defective parts, all of which must now be destroyed or reworked. In JIT philosophy, there are two ways to resolve the above problems.

**Kanban Card:** It is a notification card that a down stream machine sends to each upstream machine that feeds it with parts, authorising the production of just enough components to fulfill the production requirements. This is also know as “pull” system, since these cards are initiated at the end of the production process pulling work authorisations through the production system. WIP cannot pile up since it can be created only with kanban authorisation.

**Working Cells:** A Working cell is a small cluster of machines, which can be run by a single machine operator. The establishment of working cells has the following advantages:

- The individual machine operator takes each output part from machine to machine within the cell and thus there is no way for WIP to build up between machines.
- The operator can immediately identify defective output which otherwise is difficult for each machine of the cell. The smaller machines used in a machine cell are generally much simpler than the large automated machinery they replace. Hence maintenance costs are reduced.
- It is much easier to reconfigure the production facility when it is necessary to produce different products, avoiding the large expense of carefully repositioning and aligning equipment.



A just-in – time (JIT) approach is a collection of ideas or philosophy that streamline a company's production process activities to such an extent that waste of all kinds viz., material and labour is systematically driven out of the process. Just in Time Technique enables a company to ensure that it receives products / spare parts/materials from its suppliers on the exact date and at the exact time when they are needed.

JIT has a decisive, positive impact on product costs.

JIT helps in reducing waste of time; thereby the entire production process is concentrated on the time spent in actually producing products. For example, all inspection time is eliminated from the system as operators conduct their own quality checks. Secondly, all movement, which involves shifting inventory and work-in-process throughout various parts of the plant, can be eliminated by clustering machines together in logical groupings. Third, queue time is eliminated by not allowing inventory to build up in front of machine. Finally, one can eliminate storage time by clearing out excessive stocks of inventory and having suppliers deliver parts only as and when needed. Another way in which waste may be eliminated in a JIT system is to charge cost drivers to wasteful activities that accumulate costs. By shrinking the amount of wastage of time out of the manufacturing process, a company effectively eliminates activities that do not contribute to the value of a product, which in turn reduces the costs associated with them.

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to a certain extent within the cell, but the JIT philosophy is based on the thinking that it is more beneficial to absorb short run idle time than adding inventory during these periods. During idle time workers perform preventive maintenance on their machine.

### **Material Requirement Planning (MRP):**

1. Material Requirement Planning is a computerised Production Scheduling System providing a basis for production decisions.
2. It progressively translates the forward schedule of final product requirements (the master production schedule) into the numbers of sub-assemblies, components and raw materials required at each stage of the manufacturing cycle.
3. In other words, MRP involves input planning based on output budget.

### **Objectives of Material Requirement Planning:**

- To determine quantity and timing of finished goods production as per the master production schedule.
- To ascertain quantity of raw materials, sub-assemblies and components required for budgeted production, based on bill of materials.
- To compute the inventories, work-in-progress, batch sizes and manufacturing and packaging lead times.
- To control inventory by ordering bought-in components and raw materials in relation to the orders received or forecast.
- To forecast the inventory position period-by-period for a future time period of a manufacturing operation.
- To serve as an inventory information system helpful in planning for raw materials and components parts.
- To generate purchase requisition notes and purchase orders through computer system automatically.

### **Pre-requisites for successful operation of MRP System:**

1. **Production Schedule:** The latest production and purchasing schedules prepared should be strictly adhered to day-to-day change from predetermined schedules will cause chaos.
2. **Standard Material Input:** The raw materials, sub-assemblies and components required for production should be predetermined in quantifiable terms. Standards should be set for the consumption quantity, quality, mix and yield of raw materials, for every unit of the finished output.
3. **Workers cooperation:** Workforce must be apprised of the system and the need for absolute adherence to the schedules prepared. Also necessary internal control system should be developed to ensure the total adherence to the schedule.



4. **Accuracy of data:** accuracy of the data supplied is vital to the MRP system. Adherence to the purchase and production schedule becomes difficult in the absence of accurate data.

### Value Chain Analysis:

Value Chain is the series of internal processes or activity a company performs “to produce its product, to design its product, to deliver its product, to support its Product”.

Increasing attention is now being given to value chain analysis as a means of increasing customer satisfaction and managing costs more effectively.

It is the linked set of value creating activities all the way from basic raw material sources for components suppliers through to the ultimate end-use product or service delivered to the customer.

Coordinating the individual parts of the value chain together creates the conditions to improve customer satisfaction, particularly in terms of cost efficiency quality and delivery.

A firm, which performs the value chain activities more efficiently, and at a lower cost, than its competitors will gain a competitive advantage. Therefore it is necessary to understand how value chain activities are performed and how they interact with one another.

The activities are not just a collection of independent activities but a system of interdependent activities in which the performance of one activity affects the performance and cost of other activities.

It is also appropriate to view the value chain from the customer’s perspective with each link being seen as the customer of the previous link. If each link in the value chain is designed to meet the needs of its customers, then end-customers, satisfaction should ensure.

Activities are the means by which a firm creates value in its products. (They are sometimes referred to as value activities). Activities incur costs, and, in combination with other activities, provide a product or service which earns revenue. Firms create value for their buyers by performing these activities.

Porter (in Competitive Advantage) analysed the various activities of an organisation into a value chain. This is a mode of value activities and the relationships between them. Here is a diagram of the value chain (figure in the next page) :

Let us examine some of these elements in turn.

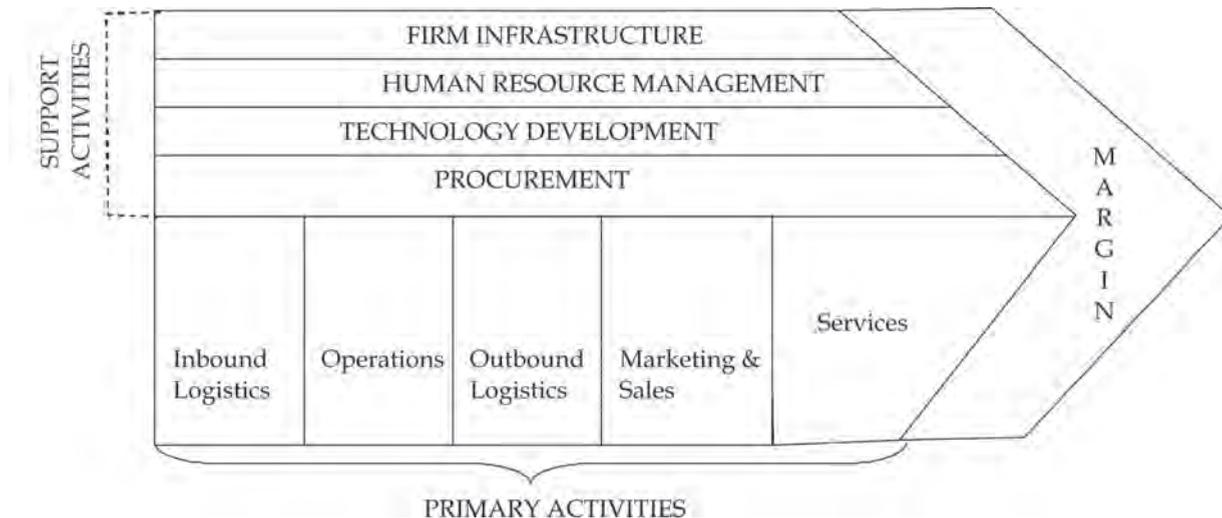
Primary activities are those directly related with production, sales, marketing, delivery and services. The diagram shows five primary activities.

- (i) Inbound logistics are those activities involved with receiving, handling and storing inputs to the production system. It thus includes warehousing, transport, stock control and so forth.
- (ii) Operations are those activities which convert inputs into final product.
- (iii) Outbound logistics are those activities relating to storing the product and its distribution to customers.
- (iv) Marketing and sales are those activities that relate to informing customers about the product,



persuading them to buy it and enabling them to do so. This includes advertising, promotion and so forth.

- (v) After sales service. For many companies there are activities such as installing products, repairing them, providing spare parts and so forth.



Support activities are those which provide purchased inputs, human resources, technology and infrastructural functions to support the primary activities. Support activities include the following.

- (i) Procurement reports to those activities which acquire the resource inputs to the primary activities.
- (ii) Technology development. These activities are related to both product design and to improving processes and/or resource utilisation.
- (iii) Human resource management is the activities of recruiting, training, developing and rewarding people.
- (iv) Firm infrastructure. The system of planning, finance, quality control are activities which Porter believes are crucially important to an organisation's strategic capability in all primary activities.

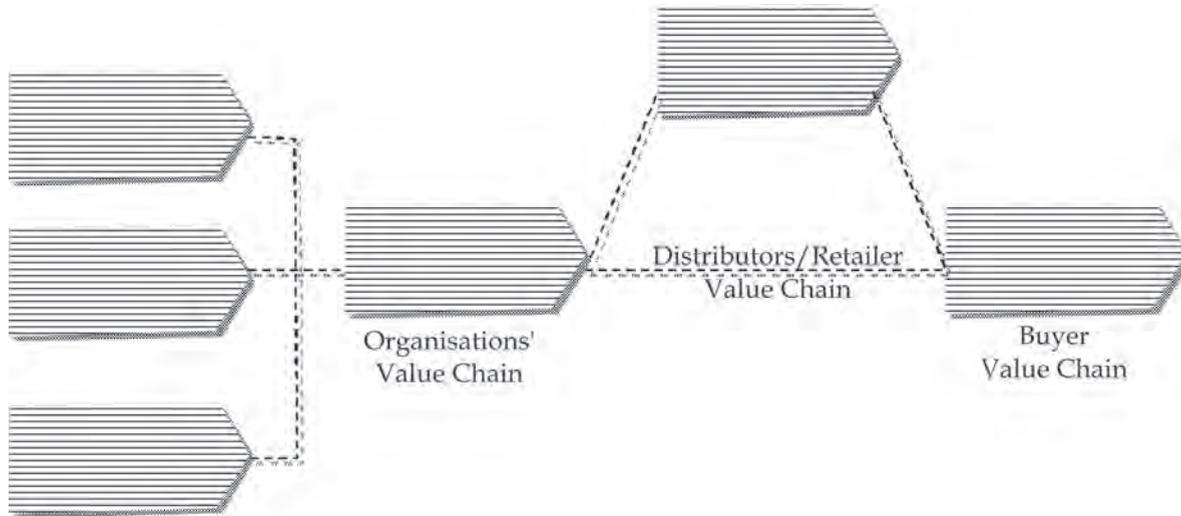
Furthermore, in addition to the categories described above Porter identifies three other ways of categorising activities.

- (i) Direct activities are concerned with adding value to inputs,
- (ii) Indirect activities enable direct activities to be performed.
- (iii) Quality Assurance. This type of activity monitors the quality of other activities and includes:
  - Inspection
  - Review



➤ Audit

Linkages connect the interdependent elements of the value chain together. They occur when the element of the value chain affects the cost or effectiveness of another. The value chain contains an element for margin. This is the excess of the amount that the customer is prepared to pay over the cost of the resource inputs and value activities. Firms can gain competitive advantage by concerning of new ways to conduct activities, employing new procedure, implementing new technologies or using different inputs and by exploiting linkage effectively.



A company's value chain is not bounded by a company's borders. It is connected to what Porter describes as a value system.

As well as managing its own value chain, a firm can secure competitive advantage by managing the linkages with its suppliers and customers. A company can create competitive advantage by making best use of these links and this means considering the value chains of these supplies and customers.

A value chain is also a model for analysing a firm's competitors, and also further on in the planning process for designing strategies. A firm's value chain is not always easy to identify nor are the linkages between the different elements. However, it is an important analytical tool, because it helps people:

- to see the business as a whole;
- to identify potential sources of competitive advantage.

(b) The value chain models are the process by which organisation convert inputs into outputs. If the purpose of this process is the creation of value, then the accountant can contribute to the strategic analysis of costs. However, Porter has said, while systems do certain useful data for cost analysis, they often get in the way of strategic cost analysis. Although many accounting reports contain a value added statement frequently, such statements:

- are little more than an analysis of sales revenue less purchases.
- ignore how value is created, including :



- linkages within the firm
- other elements within the value system involving outsiders.

A summary of the failure of traditional cost systems is outlined in the table below.

	Traditional Costing Systems	Value Chain Cost analysis
Focus	➤ Manufacturing operations	➤ Customers ➤ Value perceptions
Cost Object	➤ Products ➤ Functions ➤ Expense heads	➤ Value-creating activities ➤ Product attributes
Organisational Focus (SBUs)	➤ Cost and responsibility centre	➤ Strategic Business units ➤ Value-creating activities
Linkages	➤ Largely ignores ➤ Cost allocations and transfer prices used to reflect interdependencies	➤ Recognised and maximises
Cost drivers	➤ Simple volume measures	➤ Strategic Decisions
Accuracy	➤ High Apparent precision	➤ Low precision ➤ Indicative answers

What might influence the cost of the value chain?

- (i) Structural cost drives are major strategic choices made by the firm which determine its underlying cost base.

These include the following:

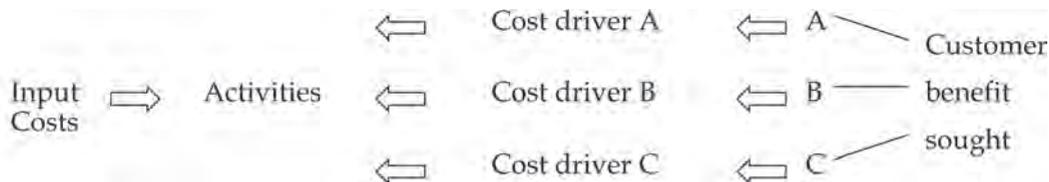
- Scale of operations, capacity etc, giving rise to economies of scale or otherwise.
  - Scope: to what extent is the firm vertically integrated?
  - Experience: has the firm climbed the learning curve?
  - Technology used in the value chain.
  - Complexity and breadth of product range.
- (ii) Management issues which influence how well a firm manages the value chain in operation terms, include:
- Capacity utilisation
  - Product and process design.
  - Continued learning opportunities offered by TQM and continuous improvement programmes.



- How well external linkages are exploited.

Firms may create a more outward-looking focus in their costing system as follows:

- (i) Most products are a collection of benefits, which is why customer buys them. Ultimately, the provision of customer benefits is the real cost driver of the business, and it should be possible to work backwards, as it were, from the customer benefits to the underlying costs.



- (ii) For different products, it should be possible to identify the:

- Customer's perception of the value of the benefit.
- The cost of providing the benefit.

This is a sort of cost/benefit analysis. Those benefits which are least costly to provide should be offered first of all.

For the accountant, a problem with this approach is:

- A lack of precision in the data;
- The inevitable subjectivity in deciding what customer's value as a benefit.

### Management Accounting and the Value Chain:

The value chain ignores conventional departments and looks at activities and processes instead. It also seeks to examine the potential for reducing overheads by identifying the primary activities that cause them. Because this will necessitate a reconfiguring of cost information, the chartered management accountant is likely to be a key figure in any value chain exercise. You should note the similarity between Porter's approach to overheads and the philosophy of activity-based costing (ABC). The latter also accepts that so-called overheads are not caused by factors outside management control, but rather are often generated by the way the firm carried out its activities, the diversity in its product range and the variability between the demands of its customers. Identifying what causes overheads is a first step to controlling them or rethinking what drives the firm's profitability.

The following approach pursues 'Strategic Cost Analysis' suggested by Shank & Govindarajan (1993) which builds on the insights of activity-based costing.

Strategic cost analysis will involve the following steps:

1. Identify the activities conducted by the business units and group them within the value chain categories.
2. Ascertain the costs generated by conducting each activity. This may necessitate identifying several sub-activities within the category of the value chain (e.g. the various factory processes)



which together make up 'operations') which may have different cost characteristics.

3. Identify opportunities for cost reduction by changing the activity or its linkages without harming its value to the customer. Alternatively, value may be enhanced, augmenting an activity and so allowing a higher price to be charged for the product.

## Supply Chain Management:

Supply chain management is often explained with reference to Porter's value chain and value systems. According to a leading authority (Christopher, 1998):

'The supply chain is the network of organisations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services in the hands of the ultimate consumer'.

Note that it is different from supply management; the management of goods inward to the firm. Supply chain management is the entire chain leading to the end customer in which the firm concerned will be only one link.

Logistics management is most well known in its military application: the development of procurement, storage and supply lines to support battlefield troops. Both Napoleon and Hitler lost armies and eventually campaigns when their logistic chains into Russia became too long to maintain and defend. However, very similar concerns face burger bars, retail stores, car manufacturers and airlines as they attempt geographical expansion. Logistics management deals with issues such as:

- procurement management,
- materials movement and storage,
- finished inventory and
- moving of finished goods through distribution channels.

Supply chain management considers logistics but also relationships between members of the supply chain, identification of end-customer benefit and the organisational consequences of greater inter-firm integration to form 'network organisations'.

According to Christopher (1998), several forces have led to a radical rethink of traditional logistics management:

- **The customer service explosion.** Customers have come to expect service excellence and will leave any firm that does not provide it. This increasingly means reliable availability and on-time delivery of the final product. This demands that all links in the supply chain can provide the same to their downstream customers.
- **Time Compression.** Short product life-cycles and rapid new product development are the norm. Thus the supply pipeline must be short to avoid slow response and lots of obsolete product and inventory.
- **Globalisation of Industry.** Many organisations operate globally and depend on a complex web of international transfers of materials, components and finished product. Many seek



to use logistics to combine the benefits of the economies of scale from volume production with the potential to customise products to the needs of local markets.

- **Organisational Integration.** Classical organisation theory believed in chopping businesses up into departments and divisions. This puts barriers up to the sorts of communication and information flows that are essential to meet the fast-changing needs of customers and challenges of competition. Consequently teams are the norm, backed up by partnerships between suppliers and their customers.

Supply chain management has three themes:

1. **Responsiveness.** Firms must be able to supply their customers quickly. This has led to JIT systems.
2. **Reliability.** These deliveries must be reliable. This means that there must be transparency in the supply-chain such that upstream firms can 'see the order coming' from the customer well in advance.
3. **Relationships.** Responsiveness demands that members of the supply chain develop a high degree of mutual understanding of each other's methods and trust in each other's ability to supply. This cannot be sustained if the former confrontational model of customer/supplier relations is used where each constantly looks for better deals elsewhere. Single sourcing and long-term contracts are the norm in modern supply chain management.

Supply chain management should proceed through the following stages:

1. **Create a logistics vision.** This is deciding how logistics strength can be used to deliver customer value. It will require the firm to identify which logistics activities it excels at (i.e. its core competence) and which it should contract out. For example, a national retail and wholesale newsagents found that it excelled at the shop and warehouse elements of the supply chain from publisher to reader. However, its attempts to manage a delivery company and lorry fleet were abandoned and contracted out. Trying to do it all leaves the entire supply chains only as good as its weakest link, which may not be good enough in a competitive world.
2. **Develop the logistics organisation.** Traditional organisational structures are divisionalised into separate business functions (marketing, production, sales, etc.), and each is arranged hierarchically. This impedes information flows and, as a consequence, reduces 'pipeline transparency'. Moreover, a 'functional silo' mentality is created, which puts divisional interests before those of the organisation or the customer and leads to inventory being built up at the interfaces. This should be replaced with a 'horizontal organisation' that focuses the key processes of supply chain management on the customer.
3. **Increase integration.** The organisation and its upstream and downstream partners should be linked by information. This necessitates the following supply chain policies:
  - Supply base rationalisation: Cut the number of suppliers and let each supply more of the final assemblies or components. This enables closer relationships to be built.
  - Supplier development programmes: Cross-functional specialists work with supplier organisations to improve quality and ensure process improvement.



- Early supplier involvement in design: Let the supplier help design cost-effective components for the finished product.
  - Integrated information systems: Replace paper orders and instructions to suppliers with information networks. For example, by using computer-aided design (CAD), suppliers can have access to the firm's designs and so get working on designing components quicker. Similarly, electronic data interchange (EDI) is much quicker and more accurate than oral or paper orders. If these EDI orders originate from the point at which the customer orders the product, then suppliers can fine-tune their supply better.
  - Centralisation of inventory: The final sales point carries a minimum of inventory but instead is able to gain access to the supply chain database to specify products on a 'cook to order' basis.
4. **Manage the supply chain as a network.** This replaces the 'us and them' mentality of the conventional buyer/seller relationship with one based on collaboration and common interest. Elements of this include:
- Collective strategy development: all members of the network share their strategic thinking.
  - Win-win thinking; an end to thinking that the only way to increase the firm's profits is to strike harder bargains with upstream and downstream partners. All partners come to believe they are better off by collaboration.
  - Open communication: this involves EDI links but also open book accounting in which cost data is shared with upstream and downstream partners to ensure that all partners are paid reasonable fees and there are no suspicions of excessive profits being enjoyed by one member of the network.

### **Life-Cycle Costing:**

It focuses on total cost (capital cost + revenue cost) over the products life including design.

CIMA defines life cycle costing as the practice of obtaining over their life time, the best use of physical asset at the lowest cost of entity.

The term 'Life Cycle cost' has been defined as follows, " It includes the costs associated with acquiring, using, caring for and disposing of physical asset including the feasibility studies, research, design, development, Production, maintenance, replacement and disposal as well as support, training and operating costs, generated by the acquisition use, maintenance and replacement of permanent physical assets".

1. Life cycle costing estimates and accumulates costs over a products entire life cycle.
2. The objective is to determine whether costs incurred at different stages of development, (planning, designing, & testing) manufacturing (conversion activities) and marketing (advertising distribution, & warranty) of the product will be recovered by revenue to be generated by the product over its life cycle.



3. Life cycle costing provides an insight, useful for understanding and managing costs over the life cycle of the product.
4. In particular it helps to evaluate the viability of the product, decides on pricing of the product at different stages of product life cycle and often helps to estimate the value of the product to its users.
5. When used in conjunction with target costing, life cycle costing becomes an important tool for cost management.
6. Life cycle costing estimates and accumulates costs over a products entire life cycle in order to determine whether the profits earned during the manufacturing phase will cover the costs incurred during the pre-and post manufacturing stages.
7. Identifying the costs incurred during the different stages of a product's life cycle provides an insight into understanding and managing the total costs incurred throughout its life cycle. In particular, life cycle costing helps management to understand the cost consequences of developing and making a product and to identify areas in which cost reduction efforts are likely to be most effective.
8. Most accounting systems report on a period-by-period basis, and product profits are not monitored over their life cycles. In contrast product life cycle reporting involves tracing costs and revenues on a product-by-product basis over several calendar periods throughout their life cycle.
9. A typical pattern of cost commitment and cost incurrence during the three stages of a product's life cycle-the planning and design stage, the manufacturing stage and the service and abandonment stage.
10. Committed or locked in cost are those cost that have not been incurred but that will be incurred in the future on the basis of decisions that have already been made. Costs are incurred when a resource is used or sacrificed.
11. Costing system record costs-only when they have been incurred. It is difficult to significantly alter costs after they have been committed. For example the product design specifications determine a product's material and labour inputs and the production process. At this stage costs become committed and broadly determine the future costs that will be incurred during the manufacturing stage.
12. That approximately 80% of a product's costs are committed during the planning and design stage. At this stage product designers determine the product's design and the production process. In contrast the majority of costs are incurred at the manufacturing stage, but they have already become locked in at the planning and design stage and are difficult to alter. Cost Management can be most effectively exercised during the planning and design stage and not at the manufacturing stage when the product design and processes have already been determined and costs have been committed.

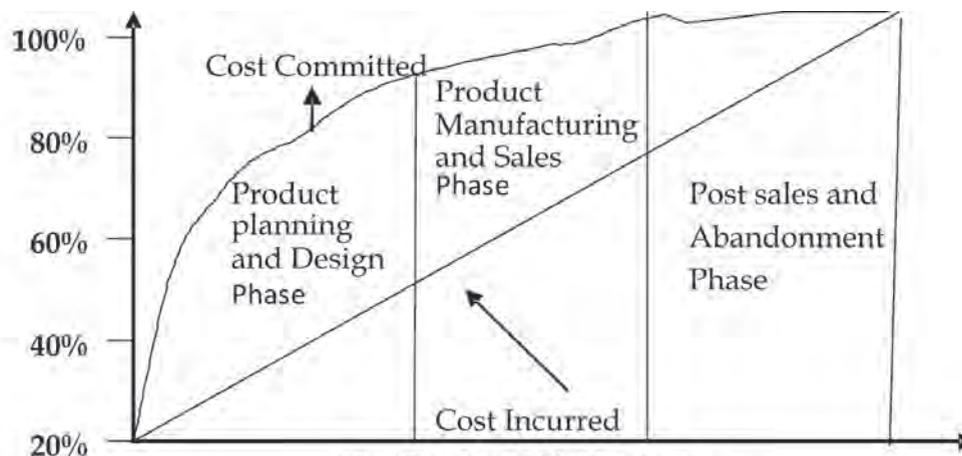


Fig.: Product Life-Cycle Face

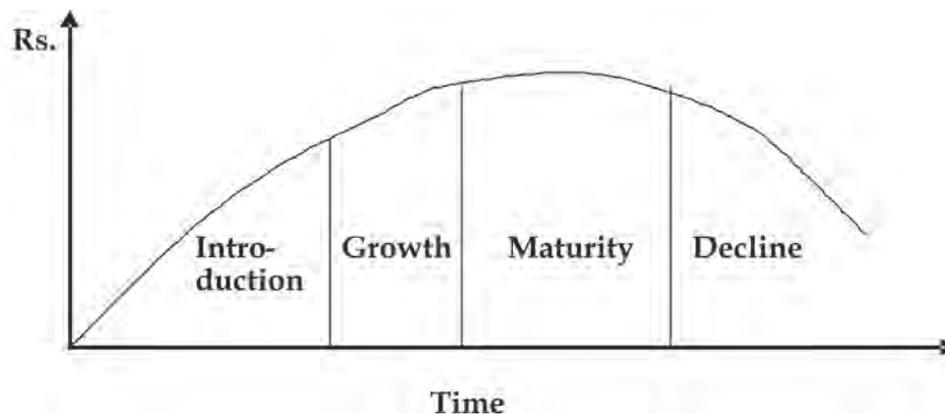
### Stages of Product life Cycle:

1. **Market research:** It identifies, the products which customers want, how much they are prepared to pay for it and how much quantity they intend to buy.
2. **Specification:** It Provides details such as required life, maximum permissible maintenance costs, manufacturing, units required delivery date, expected performance of the product.
3. **Design:** Proper drawings and Process schedules are defined.
4. **Prototype manufacture:** Prototype may be used to develop the product and eventually to demonstrate that it meets the requirements of the specifications.
5. **Development:** Testing and changing to meet the requirements after the initial run as a product when first made rarely meets the specifications.
6. **Tooling:** Tooling up for production means building a production line, building expenses jigs, buying the necessary tool and equipments.
7. **Manufacture:** It involves the purchase of raw material and components use of labour to make and assemble the product.
8. **Selling:** Stimulating and creating demand for the product when the product is available for sale.
9. **Distribution:** The product should be distributed to the sales outlets and to the customers.
10. **Product support:** The manufacturer or supplier should make sure that spares and expert servicing facilities are available for the entire life of the product.
11. **Decommissioning:** When a manufacturing product comes to an end, the plant used to build the product must be sold or scrapped. The four identifiable phases in the Product Life Cycle are (a) Introduction (b) Growth (c) Maturity and (d) Decline. A comparative analysis of these phases is given below:



Particular	Introduction	Growth	Maturity	Decline
Phase	I	II	III	IV
Sales Volumes	Initial stages, hence low	Rise in sales levels at increasing rates	Rise in sales levels at dec. rates	Sales level off and then start decreasing.
Prices of Products	High levels to cover initial costs and promotional exps.	Retention of high-level prices except in certain cases.	Prices fall closer to cost, due to effect of competition.	Gap between price and cost is further reduced.
Ratio of Promotion expenses to sales	Highest due to effort needed to inform potential customers, Launch products, distribute to customers etc.	Total exp. Remain the same while ratio of S&D OH to sales is reduced due to increase in sales.	Ratio reaches a normal % of sales. Such normal % becomes the industry standard.	Reduced sales promotional efforts as the product is no longer in demand.
Competition	Negligible and insignificant	Entry of a large number of competitors	Fierce Competition	Starts disappearing due to withdrawal of products.
Profits	Nil, due to heavy initial costs.	Increase at a rapid pace	Normal rate of profits since costs and prices are normalised.	Declining profits due to price competition, entry of new products etc.

In the growth stage, the firm will maintain the prices at high levels, in order to realise maximum profits. Price reduction will not be undertaken unless (a) the low prices will lead to market penetration, (b) the firm has sufficient production capacity to absorb the increased sales volume and (c) competitors enter the market.



**Life cycle Costing:** Life cycle costs are incurred for both:

- (1) Product and services from design stage through development to market launch, production



and sale and their eventual withdrawal from market.

- (2) Product life cycle is a pattern of expenditure, sale level, revenue and profit over the period from new idea generation to the deletion of product from product range.

Product life cycle spans the time from initial R & D on a product to when customer servicing and support is no longer offered for the product. For products like motor vehicle this time span may range from 5 to 7 years. For some basic Pharmaceuticals, the time span may be 7 to 10 years.

### **Activity Based Cost Management (ABM):**

ABC Supplies the information while ABM uses the information in various analysis designs to yield continuous improvement.

1. The use of ABC as a costing tool to manage costs at activity level is known as Activity Based Cost Management (ABM).
2. Through various analyses, ABM manages activities rather than resources. It determines what drives the activities of the organisation and how these activities can be improved to increase the profitability.
3. ABM utilises cost information gathered through ABC.
4. ABM is a discipline that focuses on the management of activities as the route to improving the value received by the customer and the profit achieved by providing this value.

This discipline includes (a) Cost Driver analysis, (b) Activity analysis and (c) Performance measurement.

Stages	Activities
1	Identification of the activities that have taken place in the organisation
2	Assigning costs to cost pool for each activity
3	Spreading of support activities across the primary activities
4	Determining cost driver for each activity
5	Managing the costs of activities

**The various analyses under ABM are:**

#### **(1) Cost Driver Analysis:**

- Cost driver analysis identifies the factors that cause activities to be performed, in order to manage activity costs.
- An activity may be performed inefficiently due to a particular reason. Managers have to address this cost driver to correct the root cause of the problem.

#### **(2) Activity Analysis:**

- It involves identification of the activities of an organisation and the activity centres (or activity cost pools) that should be used in an ABC system.
- Activity analysis also identifies Value Added (VA) and Non Value Added (NVA) activities.



- The number of activity centres is likely to change over time as organisational needs for activity information evolve.

### (3) Performance Analysis:

- Performance analysis involves the identification of appropriate measures to report the performance of activity centres or other organisational units, consistent with each unit's goals and objectives.

Performance analysis aims to identify the best ways to measure the performance of factors that are important to organisations in order to stimulate continuous improvement.

### Activity Based Costing:

The Activity-Based Costing (ABC) is a costing system, which focuses on activities performed to produce products. ABC is that costing in which costs are first traced to activities and then to products. This costing system assumes that activities are responsible for the incurrence of costs and create the demands for activities. Costs are charged to products based on individual product's use of each activity. In traditional product costing system, costs are first traced not to activities but to an organisational unit, such as department or plant and then to products. It means under both, ABC and traditional costing system the second and final stage consists of tracing costs to the product.

ABC aims at identifying as many costs as possible to be subsequently accounted as direct costs of production. Any cost that is traced to a particular product via its consumption of activity becomes direct cost of the product. For instance, in conventional costing system, cost of setup and adjustment time is considered as factory overhead and subsequently assigned to different products on the basis of direct labour hours. But in ABC, setup and adjustment time is determined for each product and its costs are directly charged to each product. Thus, by emphasizing activities tries to ascertain the factors that cause each major activity, cost of such activities and the relationship between activities and products produced. The relationship between activities and products has been show in figure —



As stated earlier, there are two primary stages in ABC - first tracing costs to activities; second tracing activities to product. The different steps in the two stages of ABC are explained below:

- Step 1:** Identify the main activities in the organisation. Examples include: materials handling, purchasing, receipts, dispatch, machining, assembly and so on.
- Step 2:** Identify the factors, which determine the costs of an activity. These are known as cost drivers. Example includes; number of purchase orders, number of orders delivered, Number of set-ups and so on.
- Step 3:** Collect the costs of each activity. These are known as cost Pools and are directly equivalents to conventional cost centers.



**Step 4:** Charge support overheads to products on the basis of their usage of the activity, expressed in terms of the chosen cost driver(s).

For example, if the total costs of purchasing were Rs. 2,00,000 and there were 1,000 purchase orders (the chosen cost driver), products would be charged Rs. 200 per purchase order. Thus a batch generating 3 purchase orders would be charged  $3 \times \text{Rs. } 200 = \text{Rs. } 600$  for purchasing overheads.

To arrive at more accurate cost more accurate cost mainly for decision-making purpose. It is based on two principles:

- i. Activities consume resources.
- ii. These resources are also consumed by product services.

Activity cost is the ratio of resource consumed by an activity to the output resulting in the activity. The goal of ABC is to trace costs to products/services instead of arbitrary allocating them. ABC may be used with both job order costing and process costing. Activity-analysis and selection of cost driver for each activity are the prerequisites.

#### **The areas in which Activity Based Information is used for Decision-making:**

The areas in which Activity based Information is used for decision making are as under:

- Pricing
- Market segmentation and distribution channels
- Make-or-buy decisions and outsourcing
- Transfer pricing
- Plant closed down decisions
- Evaluation of offshore production
- Capital Investment decisions
- Product line profitability

#### **Benchmarking:**

Benchmarking is the process of identifying and learning from the best practices anywhere in the world. It is a powerful tool for continuous improvement in performance. It involves comparing firm's products, services or activities against other best performing organisations, either internal or external to the firm. The objective is to find out how the product, service or activity can be improved and ensure that the improvements are implemented.

It attempts to identify an activity that needs to be improved & finding a non-rival organisation that is considered to represent world-class best practice and studying how it performs the activity.

#### **Suggested Benchmarking Code of Conduct:**

- Principle of Legality



- Principles of Exchange
- Principle of Confidentiality
- Principle of Use
- Principle of first part Contact
- Principle of Third Party Contact
- Principle of Preparation

It is a technique for continuous improvement in performance. It involves comparing a firm's product, services or activities against other best performing organisations, either internal or external to the firm. The objective is to determine how the products, services or activities can be improved and ensuring that such improvements are implemented as well. It is a performance measure that provides the driving force to establish high performance and means to accomplish these goals.

#### **Pre-requisites of Benchmarking:**

- (i) The objectives of benchmarking should be clearly defined.
- (ii) Senior Managers should support bench marking and commit themselves for continuous improvement.
- (iii) The scope of the work should be appropriate in the light of the objectives, resources, time and experience of those involved.
- (iv) Sufficient resources should be made available to complete projects within the required time.
- (v) Benchmarking teams should have the right skill and competencies.
- (vi) Stakeholders, staff and others should be kept informed of the reasons of benchmarking.

#### **Stages in the Process of Benchmarking:**

The process of benchmarking involves the following stages:

Stage	Description
1	Planning: <ul style="list-style-type: none"> <li>➤ Determination of benchmarking goal statement.</li> <li>➤ Identification of best performance.</li> <li>➤ Establishment of the benchmarking of process improvement team.</li> <li>➤ Defining the relevant benchmarking measurement.</li> </ul>
2	Collection of Data and information
3	Analysis of the findings based on the data collected in Stage 2
4	Formulation and implementation of recommendations
5	Constant monitoring and reviewing



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## Types of Benchmarking:

The benchmarking is a versatile tool that can be applied in variety of ways to meet a range of requirements. The distinct types of benchmarks have been over a period of time. Each has its own benefits and shortcomings, and therefore, each is appropriate in certain circumstances than others.

The Benchmarking is of following as

- Competitive benchmarking
  - Strategic benchmarking
  - Global benchmarking
  - Process Benchmarking
  - Functional Benchmarking or Generic Benchmarking
  - Internal Benchmarking
  - External Benchmarking
1. **Competitive Benchmarking:** It involves the comparison of competitors products, process and business results with own. Benchmarking partners are drawn from the same sector. However to protect confidentiality it is common for the companies to undertake this type of benchmarking through trade associations or third parties.
  2. **Strategic Benchmarking:** it is similar to the process benchmarking in nature but differed in its scope and depth. It involves a systematic process by which a company seeks to improve their overall performance by examining the long-term strategies. It involves comparing high-level aspects such as developing new products and services core competencies etc.
  3. **Global Benchmarking:** It is a benchmarking through which distinction in international culture, business processes and trade practices across companies are bridged and their ramification for business process improvement are understood and utilised. Globalisation and advances in information technology leads to use this type of benchmarking.
  4. **Process Benchmarking:** It involves the comparison of an organisation critical business processes and operations against best practice organisation that performs similar work or delivers similar services. For example how do best practice organisation process customer's orders?
  5. **Functional benchmarking:** This type of benchmarking is used when organisations look to benchmark with partners drawn from different business sectors or areas of activity to find ways of improving similar functions or work processes. This sort of benchmarking can lead to innovation and dramatic improvements.
  6. **Internal Benchmarking:** Internal benchmarking involves seeking partners from within the same organisation. For example, form business units located in different areas. The main advantages of internal benchmarking are that access to sensitive data and information are easier; standardised data is often readily available; and usually less time and resources are needed. There may be fewer barriers to implementation as practices may be relatively easy



to transfer across the same organisation. However real innovation may be lacking and best in class performance is more likely to be found through external benchmarking.

7. **External Benchmarking:** External benchmarking involves seeking help of outside organisations that are known to be best in class. External benchmarking provides opportunities of learning from those who are at the leading edge, although it must be remembered that not every best practice solution can be transferred to others. In addition, this type of benchmarking may take up more time and resource to ensure the comparability of data and information, the credibility of the findings and the development of sound recommendations.

The benchmarking can be categorised into:

1. **Intra-group Benchmarking:** In Intra group benchmarking the groups of companies in the same industry agree that similar units within the cooperating companies will pool data on their process. The processes are benchmarked against each other at or operational level. Improvement task forces are established to identify and transfer best practice to all members of the group.
2. **Inter-Industry benchmarking:** In inter-industry benchmarking a non-competing business with similar process is identified and asked to participate in a benchmarking exercise. For example a publisher of schoolbook may approach a publisher of university level books to establish a benchmarking relationship. Although two publishers are not in direct competition but there are obviously many similarities in their business with respect to sources of supply, distribution channels. Each will be able to benefit from the experience of other and establish 'best practices' in their common business processes.

### Balance Scorecards:

A Scorekeeper, the management accountant designs reports to help managers track progress in implementing strategy. Many organisations have introduced a balanced score card approach to manage the implementation of their strategies.

The balanced scorecard translates an organisation mission and strategy into a set of performance measures that provides the framework for implementing the strategy. The balanced scorecard does not focus solely on achieving financial objectives. It also highlights the non-financial objectives that an organisation must achieve to meet its financial objectives. The Scorecard measures an organisation performance from four perspectives:

- Financial
- Customer
- Internal business processes
- Learning and growth

A Company's strategy influences the measures it uses to track performance in each of this perspective.

It's called the balanced scorecard because it balances the use of financial and nonfinancial performance measures to evaluate short-run and long-run performance in a single report. The



balanced scorecard reduces managers' emphasis on short-run financial performance such as quarterly earnings. That's because the non-financial and operational indicators, such as product quality and customer satisfaction measure changes that a company is making for the long run. The financial benefits of these long-run changes may not appear immediately in short-run earnings, but strong improvement in non financial measures is an indicator of economic value creation in the future. For example an increase in customer satisfaction, as measured by customer surveys and repeat purchases, is a signal of higher sales and income in the future. By balancing the mix of financial and non financial measures, the balanced scorecard broadens management's attention to short-run and long-run performance.

### **The four Perspectives of the Balanced Scorecard:**

1. **Financial Perspective:** This perspective evaluates the Profitability of the strategy. Because cost reduction relative to competitors, costs and sales growth are chipset's key strategic initiatives, the financial perspectives focuses on how much of operating income and return on capital results from reducing costs and selling more units.
2. **Customers Perspective:** This perspective identifies the targeted market segments and measures the company's success in these segments. To monitor its growth objectives, number of new customers and customers satisfaction.
3. **Internal business process Perspective:** This perspective focuses on internal operations that further the customers' perspective by creating value for customers and further the financial perspective by increasing shareholder value. Chipset determines internal business process improvement targets after benchmarking against its main competitors.

The internal business process perspective comprises three sub processes:

1. **The innovation process:** Creating products, services and processes that will meet the needs of customers, Chipset is aiming at lowering costs and promote growth by improving the technology of its manufacturing.
2. **The operations process:** Producing and delivering existing products and services that will meet the needs of customers. Chipset's strategic initiatives are (a) improving manufacturing quality reducing delivery time to customers and (b) Meeting specified delivery dates.
3. **Post sales Service** Providing service and support to the customer after the sale of a product of service. Although customers do not require much post sales service. CX1 monitors how quickly and accurately CX1 is responding to customers' service requests.

### **Learning & Growth Perspectives:**

This perspective identifies the capabilities of the organisation must excel at to achieve superior internal processes that create value for customers and shareholders.

Chipset's learning and growth perspectives emphasises three capabilities:

1. Employee Capabilities measured using employee education and skill levels.
2. Information system capabilities, measured by percentage of manufacturing processes with real-time feedback and



- Motivation measured by employee satisfaction and percentage of manufacturing and sales employees (line employees) empowered to manage processes.

**Target costing:**

Target costing is defined as “A structured approach to determining the cost at which a proposed product with specified functionality and quality must be produced, to generate a desired level of profitability at its anticipated selling price”.

**Target Costing vs. Traditional costing**

<b>Target Costing</b>	<b>Traditional Costing</b>
Production Specification	Production Specification
↓	↓
Target Price and volume	Product design
↓	↓
Target profit	Estimated cost
↓	↓
Target cost	Target cost
↓	↓
Product design	Target price

Target costing is a systematic approach to establish product cost goals based on market driven standards. It is a strategic management process for reducing costs at early stages of product planning and design. Target costing begins with identifying customer needs and calculating an acceptable target sales price for the product. Working backward from the sales price, companies establish an acceptable target profit and calculate the target cost as follows:

$$\text{Target Cost} = \text{Target Price} - \text{Target profit}$$

Target costing is different from standard costing. While target costs are determined by market driven standards (target sales price- target profit- Target cost). Standard costs are determined by design – driven standards with less emphasis on what the market will pay (engineered costs + desired markup = desired sales price).

Target costing is a common practice in Japan where markets are extremely competitive. The market determines the price of products and there is a little opportunity for the individual organisations to set prices. Therefore, controlling cost is extremely important.

There are three cost reduction methods generally used in target costing: (i) reverse engineering, (ii) value analysis and (iii) Process improvement. Reverse engineering tears down the competitor’s products with the objective of discovering more design features that create cost reductions. Value analysis attempts to assess the value placed on various product functions by customers. If the price customers are willing to pay for a particular function is less than its cost, the function is a candidate for elimination. Another possibility is



to find ways to reduce cost of providing the function, e.g. using common components. Both reverse engineering and value analysis focus on product design to achieve cost reductions. The processes used to produce and market the product are also sources of potential cost reduction. Thus, redesigning processes to improve their efficiency can also contribute to achieving the needed cost reductions.

The basic idea beneath target costing is that all product costs are predetermined before a product even reaches the production floor. For example, types of materials to be used in production method, etc. can be determined before actual production.

In these types of situation cost reduction focus of any company should be to review the costs of products, while they are still in the design stage. Every effort at the design stage is done to keep these costs to a minimum.

Target costing has been described as a process that occurs in a competitive environment. In which cost minimisation is an important component of profitability? It is based on the promise that cost planning, cost management and cost reduction must necessarily occur in the design development process of the product to minimise the total life cycle cost of the product. All acceptable definition of target costing does not exist; following important definitions have been given:

Sakurai says, "Target costing can be defined as a cost management tool for reducing the overall cost of a product over its entire life cycle with the help of production engineering, research and design, marketing and accounting departments".

The main Features or practices followed in Target Costing are

Step	Description
1	Develop a product that statistics the needs of potential customers.
2	Choose a target price based on customer's perceived value for the product and the prices competitors charge.
3	Derive a target cost by subtracting the desired profit margin from the target price.
4	Estimate the actual cost of the product. If estimated actual cost exceeds the target cost, investigate ways of driving down the actual cost to the target cost.

### **Management Accountant's role in a Target Costing Environment:**

1. The cost accountant should be able to provide for the other members of the design team a running series of cost estimates based on initial design sketches and activity-based costing reviews.
2. The cost accountant helps the project team in capital budgeting decisions.
3. The cost accountant works with the design team to help it understand cost-benefit-trade offs of using different design or cost options in the new product.
4. The cost accountant continues to compare a product's actual cost to the target cost even after the design is completed.



### Value Engineering:

1. Value engineering aims to reduce non value-added costs by reducing the quantity of cost drivers of non-value - added activities. For example to reduce rework costs. The Company must reduce rework-hours.
2. Value engineering also seeks to reduce value-added costs by achieving greater efficiency in value-added activities. For example to reduce direct manufacturing labour costs.
3. A Value added cost is a cost that if eliminated would reduce the actual or perceived value or utility (usefulness) customers obtain from using the product or service.
4. A Non-value added cost is a cost that, if eliminated would not reduce the actual or perceived value or utility (usefulness) customers obtain from using the product or service. It is a cost that the customer is unwilling to pay for Examples of non value - added costs are costs of reworking and repairing products.
5. Value engineering is a systematic evaluation of all aspects of the cost structure of a product or service, including research and development, design of products and processes; production, marketing, distribution and customer service with the objective of reducing costs while satisfying customer needs.
6. It differs from traditional approaches to cost reduction and cost control in that its focus is on the elimination of non value-added activities (e.g. waste) from the process.
7. Value engineering focuses on improving those qualities that the customer desires while reducing or eliminating unnecessary moves, queues, setup & other activities that the customer will not pay for.
8. The process is re-engineered to eliminate non-value added work and thereby enhance the value of the process to the customer.

### Learning Curve:

In case of a job which is repetitive in nature and the working time is not scheduled by the speed of machinery, an individual is likely to become more confident and knowledgeable about his work as he gains more experience. As a consequence of his learning effect he can do the job in less time than when he initially commenced the first job. Ultimately when he has acquired more experience the learning process will tend to stop. The speeding up of a job with repeated performance is known as learning effect or learning curve effect. The reduction in the required labour time thus can be quantified. Learning curve theory was first developed in the United States aircraft industry. It has been extended to other labour-oriented industries and has been extended to no production activities such as marketing efforts. Learning curve effect is not only restricted to individual but it also applies to a group of workers. However the learning effect is not an automatic natural phenomenon. All production process will not show rate of increased efficiency and there may be cases where the differences in the learning rates will be substantial.

The quantitative average time per unit produced is normally considered to be reduced by a constant percentage every time total output of the product is doubled. The following table the working of which is based on 80% learning effect can exemplify this.



Number of Units (Cumulative)	Cumulative average time per unit in hours	Total Time	Incremental time for additional units.
1	100	100	-
2	80	160	60
4	64	256	96
8	51.2	409.6	1536

Thus Learning curve can be expressed as  $y = ax^b$

Learning curve theory can be used

- To calculate the incremental cost of making extra units of a particular products,
- To set standards for labour,
- To prepare realistic production budgets and to report labour cost variances, and
- To quote contract price.

Direct labour cost and time as well as variable overhead costs, which vary with direct labour hours, are affected by learning curve. On the other hand material cost will not be affected. In case where absorption costing system is in vogue, the fixed overhead application rate may be affected due to higher production or use of capacity. Besides the above cases where learning curve will have effect directly a management accountant should bear in some other considerations, such as:

1. Sales promotion and advertising expenditure,
2. Delivery date commitments,
3. Budgeting and standard cost,
4. Cash budget,
5. Work scheduling and overtime decisions, and
6. Economics of scale.

**The areas in which the application of learning curve can help a manufacturing organisation are:**

1. Improvement of Productivity: as the experience is gained the performance of workers improves, time taken per unit reduces and thus his productivity goes up.
2. Cost Predictions: Learning curve provides better cost predictions to enable price quotations to be preferred for potential orders.
3. Work scheduling: learning curve enables us to predict the inputs required more effectively and helps in the preparation of accurate delivery schedules.
4. Standards setting: If budgets and standards are set without considering learning curve, it is meaningless because variances will arise.



## Total Quality Management:

1. TQM is defined as a set of concepts and tools for getting all employees focused on continuous improvements in the eyes of the customer. Since TQM focuses the attention of an organisation on quality, thus it helps to provide the customer with much higher quality.
2. Prudent expenditure on cost of preventing errors can often lead to larger reduction in cost of failure and consequently will lead to reduce the total cost. The organisation strives for improvement so that more and more value can be added through improved quality of product at lower cost.
3. Many companies have adopted a term used to describe a situation where all business functions are involved in a process of continuous quality improvement.
4. The TQM approach highlights the need for a customer-oriented approach to management reporting, eliminating some or more of traditional reporting practices.
5. TQM seeks to increase customer satisfaction by finding the factors that limit current performance.
6. The emphasis of TQM is to design and build quality in the product rather than allow defectives and then inspect and rectify them. The focus is on the causes rather than the symptoms of poor quality.

The three core concepts of TQIVS are: (a) Quality control, (b) Quality Assurance, and (c) Quality Management.

### The various stages/steps to be taken in the implementation of TQM:

Stages	Description
1	Identification of customers/Customers groups
2	Identifying customer expectation
3	Identifying customer decision-making requirements and product utilities
4	Identifying perceived problems in Decision making process & produced utility
5	Comparison with other organisation and benchmarking
6	Customer feedback
7	Identification of improvement opportunities.
8	Quality improvement process through (a) New strategies,(b) Elimination of deficiencies and (c) Identifying solutions.

#### Stage 1

**Identification of customers/Customers groups:** A team approach (a technique called Multi voting), the firm should identify major customer groups. This helps in generating priorities in the identification of customers and critical issues in the provision of decision-support information.



## Stage 2

**Identifying customer expectations:** Once the major customer groups are identified, their expectations are listed. The question to be answered is what does the customer expect from the firm?

## Stage 3

**Identifying customer decision-making requirements and product Utilities:** Where the focus is on quality improvement, the overriding need is to stay close to the customers and Follow their suggestions. In this way, a decision support system can be developed, incorporating both financial and non-financial and non-financial information, which seeks to satisfy user requirements. Hence, the firm finds out the answer to what are the customer's decision-making requirements and product utilities? The answer is sought by listing out managerial perceptions and not by actual interaction with the customers.

## Stage 4

**Identifying perceived problems in decision-making process and product Utilities:** Using participative processes such as brainstorming and multi voting the firm seeks to list out areas of weakness where the greatest impact could be achieved through the implementation of improvements. The firm identifies the answer to the question- what problem areas do we perceive in the decision-making process?

## Stage 5

**Comparison with other organisation and benchmarking:** Detailed and systematic internal deliberations allow the firm to develop a clear idea of their own strengths and weaknesses and of the areas of most significant deficiency. The benchmarking exercise allows the firm to see how other companies are coping with similar problems and opportunities.

## Stage 6

**Customers Feedback:** Stages 1 to 5 provide an information base development without reference to the customer. This is rectified at Stage 6 with a survey of representative customers, which embraces their view on perceived problem areas; interaction with the customers and obtaining their views help the firm in correcting its own perceptions and refining its processes.

## Stages 7 & 8

**The identification of improvement opportunities and implementation of Quality Improvement Process:** The outcomes of the customer survey, benchmarking and internal analysis, provides the input for stages, identification of improvement opportunities and the implementation of a formal improvement process. This is done through a six-step process called PRAISE, for short.

## **Kaizen Costing:**

A philosophy that sees improvement in productivity as a gradual and methodical process.



Kaizen is a Japanese term meaning “change for the better”. The concept of Kaizen encompasses a wide range of ideas; it involves making the work environment more efficient and effective by creating a team atmosphere, improving everyday procedures, ensuring employee satisfaction and making a job more fulfilling, less tiring and safer.

A method of costing that involves making continual, incremental improvements to the production process during the manufacturing phase of the product/service lifecycle, typically involving setting targets for cost reduction. Some of the key objectives of the Kaizen philosophy include the elimination of waste, quality control, just-in-time delivery, standardized work and the use of efficient equipment.

An example of the Kaizen philosophy in action is the Toyota production system, in which suggestions for improvement are encouraged and rewarded, and the production line is stopped when a malfunction occurs.

### **Re-engineering:**

In today’s competitive environment, corporations are being required to find new and improved methods of doing business. Although this may not be that difficult, it adds to the necessity of reducing cost while being innovative and this task becomes extremely difficult. Reengineering is the term used to describe the concept and method of radically redesigning business processes.

Re-engineering plays a critical role in the strategic management process to help organisations significantly change. The goal is to develop and create superior business processes to produce unique goods and services customers’ value highly.

Some companies have turned to work reengineering to pave the way for TQM. Although no single generally accepted definition has yet emerged for the concept. Reengineering can be defined as the practice of modifying company policies, procedures, methods, practices, processes, structure, organisation, systems and technology to achieve dramatic improvements in performance relative to appropriately defined critical success factors and performance measures.

Work reengineering differs from other process improvement methodologies in that it is typically approached from a project perspective, with process improvement goals and objectives and a limited time frame in mind. This project orientation keeps work reengineering focused on getting real results. Work reengineering also seeks to attain dramatic step-change increases in performance rather than the incremental change advocated by continuous improvement. This concept helps an organisation to revitalise its process. It seeks the optimal solution to operational problems without regard to what exists today. It allows a company to address policies and procedures, organisation and structure, people and culture, system and technology, all of which are subject to review and change in the search for improvement. Work reengineering recognises the risks but seeks the rewards associated with rapid and substantial change.

The success of reengineering depends not only on management’s ability to lead the corporation in change, but management’s ability to diagnose what that change should be. Before reengineering takes place, management must determine the primary purpose and the focus of the business, the culture, and organisational culture. Before reengineering, Union Carbide made a strategic



decision to focus on commodity chemicals and exit from many of its specialty chemical markets. Union Carbide was then able to focus the reengineering to meet its strategic goals. Both Kodak and IBM assumed that their visions were correct and that they could reengineer their way to prosperity. They were wrong and their employees and shareholders have suffered.

Once the vision and strategy are finalised, then companies can begin planning the reengineering. This type of change does not come about from moving a few people around or changing a couple of boxes on the organisational structure. This type of success comes from completely redesigning the organisation from scratch. That means beginning with the corporate vision and strategy.

Management needs to start with a blank piece of paper and design the organisation that will best accomplish those strategies. Many companies claim they are reengineering when in reality they are squandering corporate resources on projects that have too narrow a scope to have any impact on the bottom line. In order to affect the results of the business unit or corporation, there is a need to restructure the things that are fundamental to the functioning of the unit. Anything less will have little impact on the bottom line.

During this process, it is critical that management not only creates the right vision and the right structure but also is involved in communicating why change is necessary. Management must realise that this type of change is very upsetting to the employees. Failing to provide information only increases anxiety and makes the changes more difficult to implement. Here internal communication through effective public relations is crucial. Re-engineering can be successful when the participants of the company share the vision and the mission of the company and strive diligently to make it succeed.

Strategic management is a process by which an organisation keeps itself aligned with changing conditions. Reengineering is linked to strategic management because reengineering is doomed to failure if corporate strategy is not part of the process. Successful reengineering must be aligned with mission and vision, which are part of strategic management, to help an organisation change those business processes that are fundamental to the success of the organisation.

## **Lean Production and Accounting**

### **Lean production**

It is a Japanese approach to management which focuses on eliminating waste, and ensuring quality. It has got universal application to business in the context of design, production and distribution too. Engineer Taiichi Ohno has propounded the principles of lean production after World War II, which focused on elimination of waste, reduction of inventory and improved productivity by empowering the workers. According to him instead of maintaining the resources in anticipation of what might be required for future manufacturing; partnerships can be made with suppliers. Accordingly as per the directives of Engineer Ohno, Toyota Automobiles became made-to-order. The company was in a position to flatten their structure of management by focusing resources in a most flexible manner and through maximum utilization of multi-skilled employees. The company was capable of making changes quickly; and was able to respond faster to market demands as compared to their competitors.



The whole idea is to maximize the value of the customer's through minimization of waste. Literally, lean is the concept which means creating more value to the customers with fewer resources.

A lean organisation is one that takes into consideration the value to customers and strongly focuses on its key processes for increasing the same in a continuous manner. So, the ultimate idea and goal of lean manufacturing and production is to provide proper and perfect value to the customers through a perfect process, which creates perfect value and reduces the waste to zero level.

Lean manufacturing technique is conceptually different from the traditional manufacturing process. While traditional manufacturing process is based on the very perception of inventory but lean manufacturing on the other hand calls for zero inventory level and considers carrying inventory is a waste. According to the lean manufacturing concept, customers only pay for the value-added activities, which create value to the products and services to be supplied to them and not for any non-value added activities or mistakes by the organization. The lean production / manufacturing concept has changed the concept of manufacturing and it made the organization to define the value of the product from the point of view of the customer's, and not from the point of view of internal manufacturing, only. Successful implementation of lean manufacturing calls for a clear demarcation between a lean production system and an ordinary manufacturing/ production system.

#### **Overview of Lean Production:**

- Through continuous improvement efforts, non-value added activities or waste are eliminated completely
- It focuses on continuous improvement of processes.
- It is a manufacturing mindset concept, and is a thinking process and can not be considered as a techniques, or a culture and basically is not latest management tool
- Through physical rearrangement and system structure and control mechanisms, the organization is in a position to achieve continuous flow of product.
- Single-piece flow / small lot production is achieved through equipment set up time reduction and more attention to machine maintenance and orderly, clean work place.
- Pull reduction / Just-in-Time inventory control.

Through lean production an organization is in a position to cut costs by making the business more efficient and responsive to market needs. In this approach the management sets out to eliminate all those activities that do not add value to the production process, such as maintaining or holding of stock, repairing faulty product and unnecessary movement of people and product around the plant.

#### **Various aspects of lean production:**

- Just in time production (JIT)
- Cell production
- Kaizen (Continuous improvement)



- Quality Circles
- Total Quality Management (TQM) and zero defect production management
- Time based management
- Simultaneous engineering

### **Lean Production: Ten Rules**

1. To Eliminate waste
2. To Minimize inventory
3. To Maximize flow
4. To Pull production from customer demand
5. To Meet customer requirements
6. To do it right the first time
7. To empower workers
8. To design for rapid changeover
9. To partner with suppliers
10. To create a culture of continuous improvement (Kaizen)

### **Steps for implementation of Lean Production:**

There are five-step thought processes for guiding the implementation of lean techniques:

1. To specify value from the standpoint of the end customer by product family.
2. To identify all the steps in the value stream for each product family, eliminating whenever possible those steps that do not create value.
3. To make the value-creating steps occur in tight sequence so the product will flow smoothly toward the customer.
4. As flow is introduced, let customers pull value from the next upstream activity.
5. As value is specified, value streams are identified, wasted steps are removed, and flow and pull are introduced, begin the process again and continue it until a state of perfection is reached in which perfect value is created with no waste.

### **Major Benefits of Lean Production:**

- Reduction of waste by 80%
- Reduction in the cost of production by 50%
- Decrease of manufacturing cycle time by 50%
- Reduction of labourforce by 50% and increase of throughput
- Reduction of inventory by 80%, while increasing customer service levels
- Capacity in current facilities increase by 50%
- Higher quality



- Higher profits
- Higher system flexibility in reacting to changes in requirements improved
- More strategic focus
- Improved cash flow through increasing shipping and billing frequencies

**Remark:**

However, by continually focusing on waste reduction, there are truly no ends to the benefits that can be achieved.

**Lean Accounting:**

Lean accounting refers to the application of lean principles in the day to day accounting processes by eliminating 3Ms (muda - waste, muri - variation, and mura - strain on resources) by looking at it from the eyes of the customer/user/beneficiary group. Many organizations suffer from processes that are too large, too complex, and too hard to use. Most organizations are struggling with how to define “good processes” that are lean (e.g., short, usable, value added).

Lean accounting in direct terms involves applying the lean principles of waste elimination used to improve manufacturing processes, to the accounting processes. It is the application of lean principles to the accounting and associated functions within the enterprise. The idea is simple, but the application is not obvious within the framework of traditional accounting systems. Simplified accounting processes can only be developed by taking a look at the flow of activities in a more pragmatic way to understand whether the steps undertaken add value to the users or customers that the company serves. General application of lean accounting methods does not place much importance on traditional management accounting methods like standard costing, activity-based costing, variance reporting and cost-plus pricing, instead it looks at summarised direct costing of the value stream, use of box score reporting, and value based pricing. Lean for Accounting is the application of lean tools e.g.; 5 S process or value stream mapping, kaizens, etc. to streamline the processes within the accounting and finance functions to minimize the consumption of resources and eliminating waste. Accounting for Lean is the modifying traditional financial statements and reports to provide “Plain English Financial Statements” throughout the enterprise.

Lean accounting highlights the importance of lean performance measurement and reporting in the general accounting for lean application process. There are basically three aspects to measure lean performance, as given under:

- 1) Development of strategy which supports, organisational or plant level measurements e.g. monthly summarised box score reports.
- 2) Continuous improvement through value stream level measurements, e.g.; weekly box score reports on value flow consisting performance scores of sales productivity, operational efficacy, utilisation, inventory status, customer experience, quality, safety and people involvement in improvement programmes etc.
- 3) Process and cell design measurements driving the ‘mudiar’ process, e.g. daily reports on takt time achievement, operational equipment effectiveness, right first time yield, WIP levels, opportunities for improvements - ‘just do its’ etc).



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### **Important Considerations for the introduction of Lean Accounting:**

- 1) Using an evaluation system, to determine how much change the accounting system and processes will need to change. Based on planned progress toward a Lean Operating environment, to develop a road map to ensure that the accounting system in operation will support the environment and provide optimum benefit from the lean implementation. Begin to set executives' and operating managers' expectations, and to develop interim metrics to demonstrate the value of lean manufacturing.
- 2) Establishment of implementation principles for lean accounting, so that these should be in accordance with GAAP, SOX, all costs should be properly assigned to products, all inventories appropriately valued and all control processes are documented etc.
- 3) Since the end objective of implementing a lean environment is total plant profitability, it will be important to prioritize improvement opportunities that attack the root causes of waste. Lean teams need accounting help to understand the underlying cost drivers, and to calculate and format business cases that clarify exactly what investments are required and as precisely as possible where improvements will show up. As Lean Accounting simplifies some accounting work, it will free up accountants increasingly to work directly with operating teams to optimize investments in operations improvements.
- 4) The lean environment starts at the top, with executive focus in the form of an Executive Steering Team, and works its way to ubiquitous front-line involvement through the Lean Daily Management System. This takes many months in a large, complex organization, and the payoff starts slowly but builds momentum as it goes – success breeds success. As front line teams become increasingly effective at eliminating waste and responding to a self-tuning pull system, all categories of inventory will decrease fairly rapidly to a sustainable new configuration. As this new inventory configuration emerges, associated accounting can evolve to dramatically simpler tracking, eventually achieving a fixed level with periodic adjustments reflecting overall plant throughput.
- 5) Proper identification of value streams. Among the numerous Stock Keeping Units in most manufacturing operations, there are a limited number that define the products that customers buy, and these can generally be grouped into a very few product families that are very close in work content. The value stream of each product family is defined by mapping its processes fully from material procurement through product shipping. The value stream does not distinguish between direct labor and the indirect support – from engineering, maintenance, or material handling, for examples – that collectively produce the items. Eventually, all of these costs will be assigned directly to Cost of Goods Sold for the period in which the cost is incurred, but transition to that extremely simple accounting will be in stages and takes time.
- 6) Elimination of variance reporting and to backflush all labour and materials. In a fully-implemented Lean Accounting system, Cost of Goods Sold is equal to actual incurred period costs, since value is no longer being maneuvered through inventory. At this stage, complicated calculations of product cost variances are less helpful than focus on waste activities of all types. Overhead activities (material handling or maintenance, for example) will be managed to be highly effective with very little wasted motion.



- 7) Elimination of inventory tracking and to assign costs directly to Cost of Goods Sold as incurred. When inventory is minimized and tracked effectively at the work cell level, it will not vary enough to warrant ongoing in and out calculations and detailed analysis. Work cells will measure actual work-in-progress versus standard work-in-progress on an ongoing basis, and over and under conditions will receive immediate self-correction at the point of creation. Standard work-in-progress will be adjusted based on overall plant throughput as volumes rise or fall, and Balance Sheet adjustments can generally be made on an infrequent as-needed basis.

Since inventory is stable in a lean environment, and lead times are so short, all production costs are assignable to current period Cost of Goods.

- 8) Establishment of customer oriented target cost. In many firms, “value-added” simply means how much cost is applied to products in operations managed by the company. Since customers are buying the products offered, customers must also value the work performed. But in today’s competitive world, it is increasingly critical to start with the customer’s idea of value to establish and create a path to achieve target costs. While Lean Accounting theorists describe target costing as an element of Lean Accounting, it is in fact equally applicable to any product planning effort regardless of accounting philosophy and to determine the cost targets based on profit requirements (shareholder expectations) and customer value.

Focus cross-functional efforts and establish a plan to achieve the costs

- 9) Linking the suppliers and automating Accounts Payable. Early in the lean journey, as in-plant kanbans are set, the raw materials areas will usually loom large as an inventory reduction opportunity. From the start, the procurement team will be pressured to go back to the drawing board with suppliers, to ensure quality materials are available as and when demanded by end customers. Initial steps generally include more frequent purchases (JIT) against blanket orders for key supplies, often using credit cards to eliminate paperwork. Progressively, suppliers may gain access to end customer orders in order to automatically trigger shipments. Eventually, receipts might automatically trigger cash transfers, avoiding Accounts Payable altogether. Because this has profound implications for cash management, these stages are obviously very carefully managed by the accounting team with careful executive oversight.
- 10) Linking the Customers and automating Accounts Receivable. In the ultimate lean configuration, no product will be started, no materials purchased, no work cell activated until there is customer demand for it. So as the in-plant lead time is reduced, the company will need closer co-operation and information sharing with customers. Initially, this will simply be shorter lead time (and theoretically more accurate) forecasts.

Eventually, it could achieve a high level of visibility to the customer’s end customer, with orders triggered automatically and cash transferred as products leave the plant, thus eliminating Accounts Receivable altogether. Once again, any changes in the critical cash management areas must be done with forethought, complete control, and flawless execution.

Lean Accounting assumes profit is from maximizing flow on actual demand (pull signals) from customers; waste is any resource that impedes flow. Control is achieved through



attention to flow and waste and excess capacity provides flexibility. The team then prepares a cost analysis for calculating the cost of the value stream, which replaces the standard costing system. With this transition, value stream profitability and contribution margin become the basis for business decisions.

**Traditional Statement vs. Lean Production Statement:**

Traditional Statement	Current year (Rs.)	Last year (Rs.)
<b>Net sales:</b>	1,00,000	90,000
<b>Cost of sales:</b>		
Standard cost	48,000	45,000
Material price variance	(3,000)	10,000
Material usage variance	(2,000)	5,000
Labour efficiency variance	2,000	8,000
Labour rate variance	(2,000)	9,000
Overhead volume variance	2,000	
Overhead spending variance	(2,000)	8,000
Overhead efficiency variance	<u>16,000</u>	<u>17,000</u>
Total cost of sales	64,000	54,000
<b>Gross profit</b>	36,000	36,000
<b>Gross profit percentage</b>	36%	40%
<b>Lean Statement</b>	<b>Current Year</b>	<b>Last Year</b>
<b>Net sale:</b>	1,00,000	90,000
<b>Cost of sales:</b>		
Purchases	25,300	34,900
Inventory material: increase/(decrease)	6,000	
<b>Total material costs</b>	31,300	28,900
<b>Processing cost:</b>		
Factory wages	11,000	11,500
Factory salaries	2,100	2,500
Factory benefits	7,000	5,000
Services and supplies	2,200	2,500
Equipment and depreciation	2,000	1,900
Scrap	2,000	4,000
<b>Total processing costs:</b>	26,300	26,900
<b>Occupancy costs:</b>		
Building description	200	200
Building services	<u>2,200</u>	<u>2,000</u>
<b>Total occupancy costs:</b>	2,400	2,200
<b>Total manufacturing costs:</b>	60,000	58,000
<b>Inventory/labour, overhead: (increase/decrease)</b>	<u>4,000</u>	<u>(4,000)</u>
<b>Cost of sales</b>	64,000	54,000
<b>Gross profit</b>	36,000	36,000
<b>Gross profit percentage</b>	38%	40%



### Observations and Conclusion:

In Lean Accounting, what we observe that, there no adjustments are made with reference to various variances with the standard cost to arrive at the gross profit, whereas costs are segregated into various heads and cost of sales has been arrived at to calculate the gross profit and it also noted that the percentage of gross profit has been increased by 2%, in the current year due to waste elimination and control over others costs, by the application of lean production concept.

### Pareto Analysis

The Italian economist Vilfredo Pareto derived what has become known as Pareto's law from his studies of income distribution in a number of countries at the turn of the 20th century. He found that roughly 80 per cent of the wealth was held by 20 per cent of the people and that the number of people holding a particular level of wealth fell by a constant factor each time that level was doubled. While his findings were taken as proof by some people of the inequities of capitalism, Pareto predicted that his law of "predictable imbalance" would also apply to communist societies. Studies conducted in the Soviet Union during the Seventies confirmed the accuracy of his forecast.

The law, which identifies the "vital few and the trivial many", has been observed in a wide range of situations. For example, 80 per cent of a tutor's time is taken up by 20 per cent of the students; 80 per cent of interruptions come from 20 per cent of the class; and 80 per cent of decisions in meetings come from 20 per cent of the time.

One of the first uses of Pareto analysis in business was for the purposes of quality management. Joseph Juran, a pioneer of modern quality methods, observed that most quality problems arose from only a few causes. Pareto analysis enabled managers to focus on the problems whose resolution would bring the greatest benefit to the enterprise. For example, IBM found, after analysing computer processing time, that 80 per cent of processing time was concerned with executing 20 per cent of software operating code. As a result, its programmers rewrote the code to make the most frequently used parts of it as streamlined as possible.

Pareto analysis is also a valuable management accounting tool, because it can be applied to a company's customers, products, departments, branches, suppliers, employees and so on to obtain insights with a view to improving efficiency and effectiveness.

### Importance of Pareto Analysis:

Pareto analysis is useful to:

- Prioritize problems, goals and objectives.
- Identify root causes
- Select and define key quality improvement programs.
- Select key customer relations and service programs.
- Select key employee relations improvement programs.



- Select and define key performance improvement programs.
- Maximize research and product development time.
- Verify operating procedures and manufacturing processes
- Sales/distribution of Products or services.
- Allocate physical, financial and human resources.

### **Application of Pareto Analysis:**

Pareto analysis is applicable in the presentation of Performance Indicators data through selection of representative process characteristics that truly determine or directly or indirectly influence or conform the desired quality or performance result or outcome. It is generally applicable to the following business situations:

- **Product Pricing:** Where a company sells a number of products, it may not be possible to analyse cost -volume-price- profit relationships for all products. Pareto Analysis is used for analyzing the firm's estimated sales revenues from various products and it might indicate that approximately 80% of its total sales revenue is earned from about 20% of its products.

This helps top management to delegate the pricing decision for approximately 80% of its products to the lower managerial levels. Top management can concentrate on pricing decisions for the important 20% products, which are essential for the company's survival. Sophisticated pricing methods can be adopted for the important products while for other products cost based pricing methods may be used.

- **Customer profitability Analysis:** The modern business thinking is to recognize the customer and satisfy his requirements. Hence instead of analyzing products, customers can be analysed for their relative profitability to the organization.

It is often found that approximately 20% of customers generate 80% of the profits. Such analysis is useful for evaluation of the portfolio of customer profile, and decision making such as whether to continue serving a customer group, what is the extent of promotion expenses to be incurred etc.

- **ABC Analysis - Stock Control:** Raw material stock control, it is found that only a few of the goods in stock make up most of the value.

About 70% of the materials value is due to high priced materials which constitute only 20% of the quantity. These materials are classified into A, B and C categories based on their importance. Control is directed primarily over 'A' category items by setting EOQ, Stock levels, Surprise Stock Verification procedures etc.

The outcome of such analysis is that by concentrating on small proportion of stock items that jointly accounts for 80% of the total value, a firm will be able to control most of the monetary investment in stocks.

- **Activity Based Costing:** Activity Based Costing involves the identification of cost drivers for various items of Overhead expenses. Generally, 20% of the firm's cost drivers are responsible for 80% of the total cost. By analyzing, monitoring and controlling those cost



drivers that attribute to high costs, a better control and understanding of overhead will be obtained.

- **Quality Control:** Pareto analysis can be extended to discover from an analysis of defect report or customer complaints which 'vital few' causes are responsible for most of the reported problems. Generally 80% of reported problems are traceable to 20% of the underlying causes. By concentrating one's efforts on rectifying the vital 20%, one can have the greatest immediate impact on product quality.

Pareto Analysis indicates how frequently each type of failure (defect) occurs. The purpose of the analysis is to direct management attention to the areas where the best return can be achieved by solving most of quality problems, perhaps just with a single action.

Considering figure 1: which shows the sales income gained by a company called ABC Co. Ltd. from each of its 20 customers over the past year. The first step in a Pareto analysis is to sort the customers in descending order according to their sales values.

**Figure 1: Sales values of ABC Co's customers**

Customer	Sales (Rs.)	Customer	Sales (Rs.)
A	14,600	K.	219,000
B	2,190,000	L	2,978,400
C	905,200	M	335,800
D	1,664,400	N	233,600
E	262,800	O	277,400
F	321,200	P	87,600
G	2,044,000	Q	29,200
H	248,200	R	1,912,600
I	116,800	S	540,200
J	43,800	T	175,200

The next step is to calculate cumulative sales; and the final step is to calculate cumulative sales percentages, as in figure 2.

**Figure 2: Pareto analysis of ABC Co's customers**

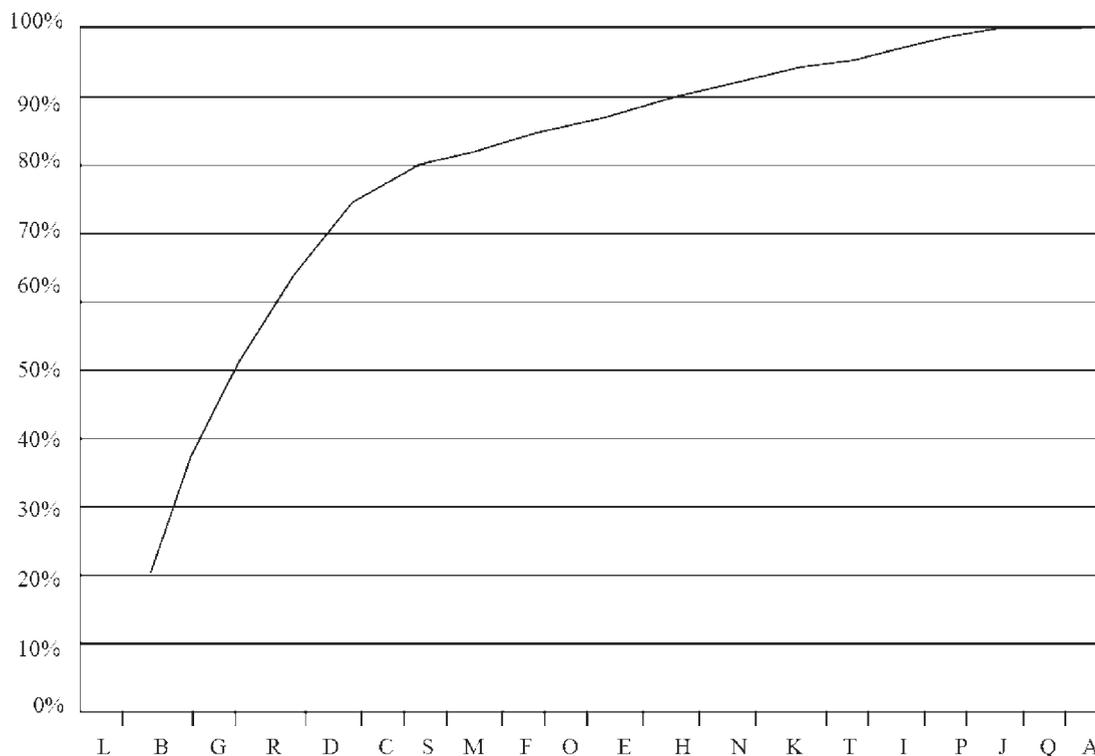
Customer	Sales (Rs.)	Cumulative sales (Rs.)	Cumulative sales in % terms
L	2,978,400	2,978,400	20.4
B	2,190,000	5,168,400	35.4
G	2,044,000	7,212,400	49.4
R	1,912,600	9,125,000	62.5
D	1,664,400	10,789,400	73.9
C	905,200	11,694,600	80.1
S	540,200	12,234,800	83.8



Customer	Sales (Rs.)	Cumulative sales (Rs.)	Cumulative sales in % terms
M	335,800	12,570,600	86.1
F	321,200	12,891,800	88.3
O	277,400	13,169,200	90.2
E	262,800	13,432,000	92.0
H	248,200	13,680,200	93.7
N	233,600	13,913,800	95.3
K	219,000	14,132,800	96.8
T	175,200	14,308,000	98.0
I	116,800	14,424,800	98.8
P	87,600	14,512,400	99.4
J	43,800	14,556,200	99.7
Q	29,200	14,586,400	99.9
A	14,600	14,600,000	100.0

While this shows that 73.9 per cent of ABC Co. Ltd.'s sales come from 20 per cent of its customers, its figures can be used to create a Pareto chart to give a more visual representation of the importance of the "vital few". The data can be presented graphically as shown in figure 3.

**Figure 3: ABC's cumulative customer sales by percentage**





Like any management accounting technique, Pareto analysis must be used with care, since it provides only an insight into a particular business issue. Further consideration and analysis is required to determine what action should be taken. Although it is tempting to conclude from this analysis that ABC Co. Ltd. should stop supplying goods to most of its customers, such a course of action may prove short-sighted. More information is required to determine whether or not a withdrawal strategy is appropriate for these customers. What is the total business available at that company? Is the business expanding? Is ABC Co. Ltd. part of a larger group?

It wouldn't make sense for the company to stop doing business with large customers to whom it currently makes few sales, small customers that are expected to expand their businesses or customers that are part of a larger group. The object of the exercise is to identify customers with poor current and future sales potential. Decisions, made after further analysis, would then be taken based on which customers ABC Co. Ltd. is prepared to do business with in the future.

Multiple analyses of the same data -sales, contribution and profit - may also be undertaken to provide a more in-depth view of the issue under consideration. A profit analysis, for example, might reveal that one of ABC Co. Ltd's. major accounts generate little profit. High sales do not always produce high profits, since they may have been obtained by undercutting competitors' prices or offering generous technical support, for example. The company would consequently consider what action it needs to take to improve its profits - for example, seek an above-inflation price increase at the next price review or determine alternative cost-effective methods of providing technical support.

A customer profitability analysis for ABC Co. Ltd's. customers produces the table shown in figure 4.

**Figure 4: ABC Co's customer profitability**

Customer	Profit (Rs)	Customer	Profit (Rs.)
A	2,800	K.	19,600
B	3,50,000	L	5,06,800
C	2,21,200	M	86,800
D	3,19,200	N	44,800
E	67,200	O	50,400
F	92,400	P	-5,600
G	4,36,800	Q	5,600
H	56,000	R	3,83,600
I	33,600	S	1,03,600
J	-2,800	T	28,000

The comparative rankings by sales and by profits in figure 5 provide more insights about the company's customers.



**Figure 5: ABC Co's customer rankings**

Customer	Rank by sales	Rank by profit	Change in rank
L	1	1	0
B	2	4	-2
G	3	2	+1
R	4	3	+1
D	5	5	0
C	8	6	0
S	7	7	0
M	8	9	-1
F	9	8	+1
O	10	12	0
E	11	10	+1
H	12	11	+1
N	13	13	0
K	14	16	-2
T	15	15	0
I	16	14	+2
P	17	20	-3
J	18	19	-1
Q	19	17	+2
A	20	18	+2

Why is B, ranked the second-largest customer in terms of sales, ranked only fourth in terms of profit? Why are customers G and R generating more profits than customer B from lower sales? Why does customer O slip two places when it is ranked by profit? Why do J and P produce losses? The management team would need to investigate these issues and seek some answers. But, before reaching a decision about what should be done with “problem” customers, ABC Co. Ltd. must consider the potential amount of sales available at these accounts.





## STUDY NOTE - 6

# Risk and Measurement of Risk

### PART - A

#### Major Contents of Part A:

- Risk and Measurement of Risk
- Various Statistical Concepts; Probability
- Loss Distributions used in Risk Management
- Integrated Risk Measures
- Risk Avoidance
- Loss Control; Types of Loss Control
- Risk Retention; Risk Transfer
- Diversification; Hedging in the context of Risk Management

#### **Risk:**

Risk, which is often used to mean uncertainty, creates both problems and opportunities for businesses and individuals in nearly every work of life. Executives, employees, investors, students, householders, travellers, and farmers all confront risk and deal with it in various ways. Sometimes a particular risk is consciously analysed and managed; other times risk is simply ignored, perhaps out of lack of knowledge of its consequences.

It may be planned for in advance and treated as a definite, known expense. It is when there is uncertainty about the occurrence of a loss that risk becomes an important problem.

Certain business environments involve higher risks than others. High-technology industries, where there is constant innovation and technological change, involve high levels of risk. In Pharmaceuticals it takes a number of years to develop and test a new drug before it can be introduced on to the market, and for much of this time there will be a real possibility that the new drug may never become a commercial success. Again, therefore, there is a high level of risk. A third example is oil exploration. The oil companies drilling in the Sea, for example, have had to invest several million rupees in the hope of finding oil. Whilst they can reduce their risk with sophisticated geological surveys before full exploration is embarked upon, there is again a risk of failure and loss of investment.

The idea of risk bearing can be tantalizing. After all, it is a well-known investment principle that the largest potential returns are associated with the riskiest ventures. There are some risks, however, that involve only the possibility of loss.

The risk surrounding potential losses creates significant economic burdens for businesses, government, and individuals.



Businesses, as well as individuals, may try either to avoid risk of loss as much as possible or to reduce its negative consequences. Overall, an entity's cost of risk is the sum of: (1) expenses of strategies to finance potential losses, (2) the cost of unreimbursed losses, (3) outlays to reduce risks, and (4) the opportunity cost of activities forgone due to risk considerations. For a particular firm, the first two components of the cost of risk are often the easiest to measure.

Risk occurs whenever anyone must make a choice and the potential outcomes involve uncertainty. In other words if a manager is faced with a decision and the alternative choices involve estimated potential gains and losses which are not certainties, the situation involves risk. The outcome of a typical decision will be dependent on a number of factors, such as customer reaction, levels of demand and competitor reactions. Some managers will understand the situation better than others might, and partly for this reason is happier to accept the risk involved in a particular choice. Personality also affects the willingness to accept and take a particular risk.

It is important that there is compatibility between the strategic leader's attitude towards risk and the demands of the industry. A risk-averse strategic leader in a high risk industry may miss valuable opportunities.

Risk increases as the amount of potential loss increases. Although the odds of winning and losing are identical, the risk involved in each situation is different. The potential loss in the second case is 100 times greater than in the first, and it consequently involves greater risk.

The following criteria are important in the decision:

- The attractiveness of each option to the decision maker.
- The extent to which he or she is prepared to accept the potential loss in each.
- Alternative the estimated probabilities of success and failure.
- The degree to which the decision maker is likely to affect the success or failure.

Hence in considering risk and strategic leadership in an organisation a number of factors are worth investigating. It may well have an effect if the strategic leader is a significant shareholder rather than a minor one. Similarly, in the case of managers throughout the organisation who are involved in strategic decisions in various ways, the culture and values of the organisation with regard to reward for success and sanction for failure will be important. So too will be the personality of the managers and their awareness of the relative pay-offs and probabilities of success and failure. Attitudes towards risk also affect the way managers make decisions.

Environmental factors may prove significant. The availability and cost of finance, forecasts of market opportunities and market buoyancy, and feelings about the strengths and suitability of internal resources will all be important. For other managers within the organisation the overall culture and styles of leadership and the reward systems will influence their risk taking.

Risk, vulnerability, opportunity and timing are linked. Where organisations, having spotted an opportunity, act quickly, there is always a danger that some important consideration will be overlooked. The risk lies in these other factors, many of which need careful attention in strategy formulation.

- The likely effect on competition.



- The technology and production risks, linked to skills and key success factors can the organisation cope with the production demands and meet market requirements profitably. Innovation often implies higher risks in this area, but offers higher rewards for success.
- The product/market diversification risk. The risk involved in overstretching resources through diversification.
- The financial risk. The cash flow and the firm's borrowing requirements are sensitive to the ability of the firm to forecast demand accurately and predict competitor responses.
- Managerial ability and competence. The risk here involves issues of whether skills can be transferred from one business to another when a firm diversifies, and whether key people stay or go after a take over.
- Environmental risks. It is also important to ensure that possible adverse effects or hostile public opinion are evaluated.

Many of these issues are qualitative rather than finite, and judgement will be required. The ability of the organisation to harness and evaluate the appropriate information is crucial, but again there is a trade-off. The longer the time that the organisation spends in considering the implications and assessing the risks, the greater the chance it has of reducing and controlling the risks. However, if managers take too long, the opportunity or the initiative may be lost to a competitor who is more willing to accept the risk.

### **Pure versus Speculative Risk:**

An important classification of risk involves the concepts of pure risk and speculative risk. Pure risk exists when there is uncertainty as to whether loss will occur. No possibility of gain is presented by pure risk – only the potential for loss. Examples of pure risk include the uncertainty of damage to property by fire or flood or the prospect of premature death caused by accident or illness. In contrast to pure risk, speculative risk exists when there is uncertainty about an event that could produce either a profit or a loss. Business ventures and investment decisions are examples of situations involving speculative risk. Gains as well as losses may occur, changing the nature of the uncertainty that is present.

Both pure and speculative risks may be present in some situations. It is important to recognise that many profit-motivated, speculative risk decisions made by individuals and firms can have an impact on pure risk exposures. For example, a firm purchasing land for development is making a decision that entails speculative risk. However, if after the purchase it discovers that the land contains a latent pollution problem, the firm would then face a new pure risk. Another example is the decision that a firm makes to introduce a new product. This decision may represent primarily a speculative risk. But as has been seen for products like asbestos and silicon breast implants, this decision also is accompanied by the pure risk associated with potential product liability. Failure to consider the overlapping effects of these two types of risk can lead to decisions that overstate the potential benefits to the firm.

### **Static versus Dynamic Risk:**

Another way of classifying risk involves the extent to which uncertainty changes over time.



Static risks, which can be either pure or speculative, stem from an unchanging society that is in stable equilibrium. Examples of pure static risks include the uncertainties due to such random events as lightning, windstorms, and death. Business undertakings in a stable economy illustrate the concept of speculative static risk. In contrast, dynamic risks are produced because of changes in society. Dynamic risks also can be either pure or speculative. Examples of sources of dynamic risk include urban unrest, increasingly complex technology, and changing attitudes of legislatures and courts about a variety of issues.

Static and dynamic risks are not independent; greater dynamic risks may increase some types of static risks. An example involves uncertainty due to weather-related losses. This risk is usually considered to be static. However, recent evidence suggests that environmental pollution caused by increased industrialisation may be affecting global weather patterns and thereby increasing this source of static risk.

### **Subjective versus Objective Risk:**

A third way to classify risk is by whether it is objective or subjective. Subjective risk refers to the mental state of an individual who experiences doubt or worry as to the outcome of a given event. In addition to being subjective, a particular risk may also be either pure or speculative and either static or dynamic. Subjective risk is essentially the psychological uncertainty that arises from an individual's mental attitude or state of mind. Objective risk differs from subjective risk primarily in the sense that it is more precisely observable and therefore measurable. In general; objective risk is the probable variation of actual from expected experience. This term is most often used in connection with pure static risks, although it also can be applied to the other types of uncertainties.

The concept of subjective risk is especially important because it provides a way to interpret the behaviour of individuals faced with seemingly identical situations yet arriving at different decisions. For example, one person may be ultraconservative and tend always to take the "safe way" out, even in cases that may seem quite risk-free to other decision makers. Objective risk may actually be the same in two cases, but may be viewed very differently by those examining this risk from their own perspectives. Thus, it is not enough to know only the degree of objective risk; the attitude toward risk of the person who will act on the basis of this knowledge must also be known.

### **Property Risks:**

All businesses and individuals that own, rent, or use property are exposed to the risk that the property may be damaged, destroyed, or stolen. For example, lightning may strike a building, causing a fire that destroys the structure and the inventory, supplies, and equipment inside. Property owned or used outside of the building may also be susceptible to loss. Typical examples include trucks, automobiles, and mobile equipment. To fully analyse property risk exposures, businesses must consider both the types of property susceptible to loss and the potential sources of such risk. Sources include not only fire and lightning but also theft, tornadoes, hurricanes, explosions, riots, collisions, falling objects, floods, earthquakes, and freezing, to name only a few.



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If property damage is extensive, a business may be forced to shut down temporarily, thereby incurring a loss of income in addition to the expense of replacing the damaged property. But in some instances involving severe property damage, management may decide that temporarily closing the business is not a viable option.

### **Liability Risks:**

A second major category of risks is liability exposure.

Liability judgments may result in payments made to compensate injured parties as well as to punish those responsible for the injuries, with multimillion dollar awards no longer rare. Even when an individual is eventually absolved of liability, the expenses involved in defending a case often prove to be substantial. Consequently, both individuals and businesses must be careful to identify all sources of liability risk that may affect them and then make suitable arrangements for dealing with such exposures to loss.

As an illustration of some specific sources of liability risk, all entities that own or use real property are susceptible to liability losses if others are injured on their premises.

### **Life, Health, and Loss of Income Risks:**

Potential losses associated with the health and well-being of individuals make up the third and final category of sources of risk. The possibility of the untimely death of star salesperson Ann Costello exposes her employer to potential loss if a replacement with the same skills and experience is not readily available. Even if Ann could be easily replaced, in many cases employee deaths are disruptive for other workers and may result in temporarily reduced productivity. This phenomenon is especially true if the death is due to job-related conditions.

Businesses and individuals also face risks associated with health problems. Persons who become ill or who are injured in accidents will incur expenses for medical treatment, and the cost of such treatment is becoming increasingly expensive. Sometimes businesses arrange to pay some or all of such expenses for their employees, regardless of whether a sickness or injury is job related. As medical costs increase, however, more and more individuals (whether employed or not) must pay substantial sums each year for medical care for themselves and their families. In addition to these expenses, there is another potential loss associated with sickness and accidents. If a previously employed individual is severely injured or gravely ill, that person may be unable to work for several months or even years. The resultant loss of income can have serious repercussions on the financial stability of the person and family involved.

Other risks that confront an employed individual are those associated with unemployment and retirement. Both events result in the loss of an income source that previously existed. A significant difference, however, relates to timing. Retirement usually is not a surprise and therefore presents many options for advance planning. In contrast, abrupt layoffs often are not expected and are therefore harder to plan for ahead of time. Through pension and other retirement benefits, as well as unemployment insurance provided in each state, businesses are also affected by these risks that their employees face.

**Financial Risk:**

Although the major emphasis of this book is on pure risks, it is increasingly important that risks from other sources be considered as well. A variety of financial risks, which often are speculative in nature, can impact on a firm's earnings. Examples of these financial risks include credit risk, foreign exchange risk, commodity risk, and interest rate risk. Although most of these financial risks tend to have the characteristics of speculative risks, they still present the firm with some of the same problems associated with pure risks. Although the techniques used to manage these risks may be very different from those used to manage pure risks, it remains critical that these risks be identified and assessed in order for the firm to achieve its business goals.

**Chance of Loss:**

The long-term chance of occurrence, or relative frequency of loss, is defined to be the chance of loss. The concept has little meaning if applied to the chance of occurrence of a single event. Rather, it is meaningful primarily when applied to the chance of a loss occurring among a large number of possible events. Thus, chance of loss is expressed as the ratio of the number of losses that are likely to occur compared to the larger number of possible losses in a given group.

**Physical Hazard:**

A physical hazard is a condition stemming from the material characteristics of an object. Consider the peril of collision, which may cause loss to an automobile. A physical condition that makes the occurrence of collision more likely is an icy street. The icy street is the hazard, and the collision is the peril. The chance of loss due to collision may be higher in winter than at other times of the year because of the greater incidence of the physical hazard of icy streets.

Physical hazards include such phenomena as the existence of dry forests (a hazard affecting the peril of fire), earth faults (a hazard for earthquakes), and the existence of oily rags in a firm's storage closet (a hazard for fire). Such hazards may or may not be within human control.

**Moral Hazard:**

The condition known as moral hazard stems from an individual's mental attitude. It is associated with intentional actions designed either to cause a loss or to increase its severity. Moral hazards often are typified by individuals with known records of dishonesty. In addition, the existence of insurance may sometimes exacerbate the existence of moral hazard. For example, managers who purchase fire insurance on a factory full of unprofitable, out-of-date equipment may feel an incentive to "sell the building to the insurance company" by arranging for a fire to destroy the property. Moral hazard also describes the change in attitude that can occur when insurance is available to pay for loss, such as the tendency for individuals to consume more health care if the costs are covered by insurance.

**Morale Hazard:**

The mental attitude of a careless or accident-prone person is known as morale hazard. Sometimes



a subconscious desire for a loss may exist, even though the individual is not fully aware of this desire. In other cases, circumstances may cause someone to be indifferent to the possibility of a loss, thus causing that person to behave in a careless manner.

### **Degree of Risk:**

The amount of objective risk present in a situation, sometimes referred to as the degree of risk, is the relative variation of actual from expected losses. More precisely, the degree of risk is the range of variability around the expected losses, which are calculated using the chance of loss concept by means of the following formula:

$$\text{Objective Risk} = \frac{\text{Probable variation of actual from expected losses}}{\text{Expected losses}}$$

### **Management of Risk:**

Risk management is one of the specialised functions of general management. As such, risk management shares many of the characteristics of general management, and yet is unique in several important respects. "Management" may be defined as the process of planning, organising, directing, and controlling the resources and activities of an organisation in order to fulfill the objectives of that organisation at the least possible cost.

Risk management fits within one corner of this broad definition - the corner which is devoted to minimising the adverse effects which accidental losses and price/rate volatilities may have on the organisation. In order to fulfill its more ambitious objectives of profit, growth or public service, an organisation must first achieve a more basic goal: survival in the face of potential losses. Given this focus on potential losses, "risk management" may be defined as the process of planning, organising, directing and controlling the resources and activities of an organisation in order to minimise the adverse effects of potential losses at the least possible cost.

Risk management is a process that identifies loss exposures faced by an organisation and selects the most appropriate techniques for treating such exposures. Because the term "risk" is ambiguous and has different meanings, many risk managers use the term "loss exposure" to identify potential losses. A loss exposure is any situation or circumstance in which a loss is possible, regardless of whether a loss occurs. Examples of loss exposures include manufacturing plants that may be damaged in an earthquake or flood. Defective products that may result in lawsuits against the company, and the possible theft of company property because of inadequate security. In the past, risk managers generally considered only pure loss exposures faced by the firm. However, newer forms of risk management are emerging that consider both pure and speculative loss exposures faced by the firm.

After sources of risk are identified and measured, a decision can be made as to how the risk should be handled. A pure risk that is not identified does not disappear; the business or individual merely loses the opportunity to consciously decide on the best technique for dealing with that risk. The process used to systematically manage risk exposures is known as risk management.

Some persons use the term risk management only in connection with businesses, and often the



term refers only to the management of pure risks. In this sense, the traditional risk management goal has been to minimise the cost of pure risk to the company. But as firms broaden the ways that they view and manage many different types of risk, the need for new terminology has become apparent. The terms integrated risk management and enterprise risk management reflect the intent to manage all forms of risk, regardless of type.

Many businesses have a special department charged with overseeing the firm's risk management activities; the head of such a department often has the title of risk manager. The traditional type of risk manager may be charged with minimising the adverse impact of losses on the achievement of the company's goals. In implementing the more integrated approach to risk management, however, some firms have formed risk management committees. Some firms also have created a new position of chief risk officer (CRO) to coordinate the firm's risk management activities, regardless of the source of the risk. As part of his or her duties, the risk manager and/or CRO is likely to be involved in many aspects of a firm's activities. Examples may include developing employee safety programs, examining planned mergers and acquisitions, analysing investment opportunities, purchasing insurance to protect against some types of risk, and setting up pension and health plans for employees. The evolution of integrated risk management reflects a realisation of the importance of coordinating the many risk management activities of the firm in order to meet its strategic goals.

Whether the concern is with a business or an individual situation, the same general steps can be used to systematically analyse and deal with risk.

Known as the risk management process, these steps can be summarised as follows:

1. **Identify risks.** There are many potential risks that confront individuals and businesses. Therefore, the first step in the risk management process is to identify relevant exposures to risks. This step is important not only for traditional risk management, which focuses on pure risks, but also for enterprise risk management, where much of the focus is on identifying the firm's exposures from a variety of sources, including operational, financial, and strategic activities.
2. **Evaluate risks.** For each source of risk that is identified, an evaluation should be performed. At this stage, pure risks can be categorised as to how often associated losses are likely to occur. In addition to this evaluation of loss frequency, an analysis of the size, or severity, of the loss is helpful. Consideration should be given both to the most probable size of any losses that may occur and to the maximum possible losses that might happen. As part of the overall risk evaluation, in some situations it may be possible to measure the degree of risk in a meaningful way. In other cases, especially those involving individuals, computation of the degree of risk may not yield helpful information.
3. **Select risk management techniques.** The results of the analyses in step 2 are used as the basis for decisions regarding ways to handle existing risks. In some situations, the best plan may be to do nothing. In other cases, sophisticated ways to finance potential losses may be arranged.
4. **Implement and review decisions.** Following a decision about the optimal methods for handling identified risks, the business or individual must implement the techniques selected. However, risk management should be an ongoing process in which prior decisions are reviewed regularly. Sometimes new risk exposures arise or significant changes in



5. Expected loss frequency or severity occurs. Even pure risks are not necessarily static; the dynamic nature of many risks requires a continual scrutiny of past analyses and decisions.

### **Summary:**

- Risk is defined as uncertainty concerning loss.
- Risk creates an economic burden for society by raising the cost of certain goods and services and eliminating the provision of others.
- The cost of risk includes outlays to reduce risks, the opportunity cost of activities forgone due to risk considerations, expenses of strategies to finance potential losses, and the cost of unreim-bursed losses.
- Pure risk exists when there is uncertainty as to whether loss will occur. Speculative risk exists when there is uncertainty about an event that could produce either a profit or a loss.
- Static risks are present in an unchanging, stable society. Dynamic risks are produced by changes in society.
- Subjective risk refers to the mental state of an individual. Objective risk, which is measurable, is the probable variation of actual from expected experience.
- There are many sources of risk. One way of classifying them is in relation to property, liability, life, health, loss of income, and financial exposures.
- Chance of loss is the long-term relative frequency of a loss due to a particular peril, or cause of loss. The degree of risk is the relative variation of actual from expected losses.
- A hazard is a condition that increases the chance of loss due to a peril. Hazards can arise out of both physical conditions and the mental attitudes of individuals.
- Risk management is the process used to systematically manage exposures to pure risk. The four steps in the process are (1) identify risks, (2) evaluate risks, (3) select risk management techniques, and (4) implement and review decisions.
- Integrated or enterprise risk management is an emerging view that recognises the importance of risk, regardless of its source, in affecting a firm's ability to realise its strategic objectives.

In practice, risk management consists of certain logical steps: Identification, measurement and evaluation, control through reduction or elimination, and finance.

### **Risk Identification:**

The identification of risks and exposures to loss is perhaps the most important element of the risk management process. Unless the sources of possible losses are recognised, it is impossible to consciously choose appropriate, efficient methods for dealing with those losses should they occur.



A loss exposure is a potential loss that may be associated with a specific type of risk. Loss exposures are typically classified in the same way as are pure risks, that is, loss exposures can be categorised as to whether they result from property, liability, life, health, or loss of income risks.

It is helpful to consider techniques for identifying and evaluating risks present in particular settings. Approaches used by many risk managers involve loss exposure checklists, financial statement analysis, flowcharts, contract analysis, on-site inspections, and statistical analysis of past losses.

The first phase - Risk identification - is really the key to the whole process. The risk manager begins by identifying all of the resources for which his organisation is responsible. These resources or assets may be human, financial, material or environmental. He then considers all of the potential exposures to loss.

The risk manager is required to develop an intelligence network among fellow employees that will continuously feed appropriate risk data. Methods used to identify risk include: regular meetings with line managers and supervisors, site inspections, surveys, examination of written contracts, analysis of financial reports, risk management committee meetings, insurance company loss prevention report, analysis of historical loss experience and a close awareness of operational developments within the specific industry.

The process of identification may be relatively simple or highly complicated, depending on the size and nature of the organisation. For instance, in a small company, identification may involve only an angle plant and a single product. But in a large multinational firm, it could be a massive undertaking involving hundreds of divisions or subsidiaries located around the world. Risk identification can also be as simple as locating a cracked sidewalk that could trip a customer or employee, or as complex as determining what the firm's liability could be for the negligence of a sub-contractor.

Risks tend to fall into one of two broad categories: pure risks and financial risks. Pure risks in turn can be divided into property risk and legal liability risks. Asset or property risks are highly visible and are usually easy to identify. These are loss exposures from fire or explosion, or from natural disasters, such as floods, hurricanes, earthquakes, tornadoes or mudslides. Crime, theft and vandalism are other forms of property risks, as are oil spills and plane crashes.

Questionnaires and checklists have been developed to help risk managers locate property risks and trigger such questions as: are fire regulations observed in areas where flammable materials are in use? Is there sufficient security at the office? What are the chances of an earthquake damaging the plant? The answers to these and other questions are critical to risk control.

Legal liability risks are often the hardest to identify and potentially the most devastating. Consumer lawsuits resulting in compensatory damages of crores of rupees are now common and, in class action suits involving plane crashes or pharmaceuticals, punitive awards could be as high as tens of crores of rupees.

To discover legal liability exposures, the risk manager must ask "what if? What if an employee falls down a flight of stairs and sues the company? What if someone driving the company car crashes into a school bus and children are killed? What if a product injures a consumer? What if the wastes dumped into a river cause a pollution levels to exceed those sanctioned by the government?



The major sources of financial risk include business cycles, stock market volatility, change in interest/inflation rate, foreign exchange rate fluctuation, etc.

Appendices 1A and IB provide a profile of risks that businesses would face.

## **Risk Measurement and Evaluation:**

Once risk sources have been identified, it is often helpful to measure the extent of the risk that exists. As noted previously, risks that are classified as subjective cannot be precisely measured. In contrast, the amount of objective risk is often more readily observable.

The second step in the risk management process is measurement and evaluation of risk in order to project the frequency and severity of future losses. It is appropriate to consider property risks separately from other risks. For example, the maximum property loss (damages) that might be caused by fire is the current value to replace all physical assets that could be damaged or destroyed from a single event plus the consequential loss of income caused by impaired or curtailed operations. This maximum loss estimate is referred to by property insurance underwriters as the PML - Probable Maximum Loss or Possible Maximum Loss.

Liability losses, on the other hand, are more difficult to measure in advance. The PML or amount of maximum loss will depend on the factual situation of a specific accident or event, the prevailing law, the degree of blame on the respective parties, the competency of lawyers and often the decision of a Court of Law.

Probability and Standard deviation are also popular expressions of degree of risk associated with investments. However, these are not satisfactory indicators of volume of risk in relation to market portfolios and derivatives. Some significant strides made in this field include such measures as beta of market risk, value at risk - VAR (of portfolio investments) and Greeks (of derivative instruments) including theta, gamma, rho, and delta.

Some companies now maintain detailed computer-based data on all losses, including such information as location, time, cause and financial impact. In many industries, "incident reports" have become a key element in identifying loss trends. Trends can also be discerned in national statistics on type of losses, records of natural disasters in certain geographic areas' and studies of judicial decisions in liability cases.

Mathematical formulae can be used to project the probability and severity of loss. Sophisticated techniques such as Monte Carlo simulation, correlation and regression analysis can also be helpful. However, the wise risk manager knows that an understanding of the ever changing world and the vagaries of human nature are just as important as mathematical formulas when it comes to evaluating risk.

Once a risk is identified, the next step in the risk management process is to estimate both the frequency and severity of potential losses. In this way, the risk manager obtains information that is helpful in determining the relative importance of identified risks and in selecting particular techniques for managing those risks.

In some cases, no particular problem would arise even if losses were incurred regularly, because the potential size of each loss is small. Thus, the daily occurrence of some inventory breakage may be an expected part of some businesses and would warrant only minimal attention from



the risk manager. But other losses that occur infrequently yet are relatively large when they do occur (such as accidental deaths or destruction by a large fire) may be treated entirely differently. Such losses might cause bankruptcy if they were to happen with no means in place to counteract the resulting adverse financial effects for the firm.

One complicating factor in evaluating exposures is that many losses do not result in complete destruction of the asset involved. For example, if Jim Carson's business is struck by lightning, the building will not necessarily burn to the ground. In evaluating the risk of loss from this peril, Jim should consider three things: (1) the frequency with which lightning may strike his building, (2) the maximum probable loss that would likely result if lightning did strike, and (3) the maximum possible loss if the building were completely destroyed. The difference between these last two factors is that the maximum probable loss is an estimate of the likely severity of losses that occur, whereas the maximum possible loss is an estimate of the catastrophe potential associated with a particular exposure to risk. In other words, what is the worst possible loss that can result from a given occurrence? To assess that potential, Jim needs to consider not only the loss of the building itself but also the destruction of inventory and equipment located inside. Furthermore, if Jim would seek to operate his business from another location in the event of loss, then his estimate of maximum possible loss should also include the cost of such temporary facilities.

The actual estimation of the frequency and severity of losses may be done in various ways. Some risk managers consider these concepts informally in evaluating identified risks. They may broadly classify the frequency of various losses into categories such as "slight," "moderate," and "certain," and may have similarly broad estimates for loss severity. Even this type of informal evaluation is better than none at all. But as risk management becomes increasingly sophisticated, most large firms attempt to be more precise in evaluating risks. It is now common to use probability distributions and statistical techniques in estimating both loss frequency and severity.

### **Risk Control:**

Risk control through elimination or reduction is the third step in the process of risk management. Some risks can actually be eliminated - by deciding not to build a plant in an earthquake zone, or by not manufacturing products with substances that are harmful to workers or consumers. Risks that cannot be eliminated can be reduced through loss prevention programmes. Fire exposure can be limited by installing smoke and sprinkler systems and by making sure that "no smoking" rules are enforced in areas containing flammable materials. Burglary and vandalism can be discouraged by employing guards and watchmen and installing fencing, spotlights and alarm systems. Employee injuries can be reduced through preventive maintenance by posting clearly written instructions for the operation of machinery and by requiring workers to wear hard hats, goggles and gloves in dangerous areas.

Financial risks, by their very nature, are non-insurable. However, these risks can be hedged using derivative instruments such as futures, options and swaps.

The risk of legal liability can be limited by instituting environmental protection programmes, reducing the quantity of air, water and solid waste pollutants and designing and manufacturing products that are safe for public consumption.



Ideally, loss control programmes should also include emergency catastrophe plans. For instance, if a plant were damaged by fire or flood, the plan might outline recovery procedures. If a product defect should develop, the plan would describe procedures for public notification, methods of recall and corrective measures. If an executive were kidnapped, the plan would describe methods of communication, mobilisation of authorities and dealing with ransom demands.

Although loss control programmes may seem to be expensive, they are actually far less costly than the losses that might occur if no preventive measures were taken. In the long run, money spent on risk control is money worth spent.

### **Risk Finance:**

Developing a suitable financial plan to meet risk management objectives is the final but crucial step in risk management. It involves deciding how much of pure risk should the company retain and how much it should transfer to an insurer. All companies will purchase some insurance, but the amount will vary depending on the nature and the needs of each organisation. The goal of risk finance is to have enough funds available to sustain potential loss so that the organisation can continue to function and maintain a reasonable level of earnings.

### **Loss Exposure Checklists:**

One risk identification tool that can be used both by businesses and by individuals is a loss exposure checklist, which specifies numerous potential sources of loss from the destruction of assets and from legal liability. For each item on the checklist, the user asks the question, "Is this a potential source of loss to me or my firm?" In this way, the systematic use of loss exposure checklists reduces the likelihood of overlooking important sources of risk.

Some loss exposure checklists are designed for specific industries, such as manufacturers, retail stores, educational institutions, or religious organisations. Such lists tend to be quite lengthy, because they attempt to cover all the exposures that various entities are likely to face. Consideration is given to the cost to repair or replace property, to income losses that may accompany the destruction of assets, and to likely sources of legal liability.

A second type of checklist focuses on a specific category of exposure.

Both the risk of physical damage and the risk of liability arising from the use of property are explored-through the questions included in this checklist. Although many items may not be relevant to a particular organisation, the questions usually address specific exposures in considerable detail. Thus, these checklists can be helpful not only in risk identification but also in compiling information necessary for an in-depth evaluation of risks that are identified.

### **Financial Statement Analysis:**

Another approach that can be used by businesses to identify risks is financial statement analysis. Using this method, all items on a firm's balance sheet and income statement are analysed in regard to risks that may be present. By including budgets, long-range forecasts, and written



strategic plans in the analysis, this method can also help identify possible future risks that may not currently exist.

To illustrate this method of risk identification, consider the asset categories included on the balance sheets of business entities. Buildings owned by a firm are usually noted on its balance sheet, and leased buildings may be noted in footnotes to the financial statements. Future building acquisitions may be noted in budgets and strategic plans. Once such present and future buildings are identified, potential losses associated with them can then be considered. The loss exposures associated with building damage may include repair costs, the value of inventories and equipment inside, loss of income while the building cannot be used, and injuries to employees and customers inside the building. If a building is leased, relevant concerns would also include the disposition of the lease if the building is destroyed, including cost estimates of alternative facilities. This example does not begin to exhaust the range of possible losses that might result from damage to a building. It does, however, illustrate the thought process that is essential to the financial statement analysis method of risk identification.

### **Flowcharts:**

A third tool – the flowchart – is especially useful for businesses in identifying sources of risk in their production processes.

The question may be asked, “What events could disrupt the even and uninterrupted flow of parts to the final assembly floor, on which the whole production process depends?”

Are appropriate steps being taken to safeguard these materials from fire? Are floors kept clean and free of grease that might cause spills? Are any particular dangers threatening the storage of finished products that may require special protection? If the finished products are fragile, are appropriate protective measures being taken in loading and unloading?

Only through careful inspection of the entire production process can the full range of loss exposures be identified. And for some firms, even that may not be sufficient. It may be important, for example, to expand the flowchart to include the suppliers of parts and materials, particularly if a firm’s production process is dependent on only a few suppliers. Thus, if there is only one possible supplier of a crucial part, a complete risk analysis will include identification of potential losses to that supplier as well as to the firm itself. Similar situations may arise if a firm manufactures products that are purchased by only a few customers. In this case, expansion of the flowchart to include customers will help identify risks that might otherwise be overlooked.

### **Contract Analysis:**

The analysis of contracts into which the firm enters is another method for identifying potential exposures to risk. It is not unusual for contracts to state that some losses, if they occur, are to be borne by specific parties. For example, a company may require building contractors that it hires to bear the cost of any liability suits arising out of the builder’s construction operations. In this way, the cost of suits that might otherwise be incurred by the hiring firm will be borne by the builder.



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This type of contractual liability may be found not only in construction contracts but also in sales contracts and lease agreements. For example, a property owner with a superior bargaining position may require her tenants to be responsible for all injuries that occur on the leased premises, even if caused by the property owner's own negligence. In other situations, she might agree to bear the liability arising out of a tenant's negligence. Ideally, the specification of who is to pay for various losses should be a conscious decision that is made as part of the overall contract negotiation process. And this decision should reflect the comparative advantage of each party in managing and bearing the risk. But even where that ideal is not possible, it is important to examine all contracts so that important sources of risk are identified prior to the occurrence of any losses.

### **On-Site Inspections:**

Because some risks may exist that are not readily identifiable with the tools discussed thus far, it is important for business risk managers to visit periodically the various locations and departments within the firm. During these visits, it can be especially helpful to talk with department managers and other employees regarding their activities. Through this type of personal interaction, the risk manager can become better informed about current exposures to risk as well as potential future exposures that may arise.

### **Statistical Analysis of Past Losses:**

A final risk identification tool that may be helpful for larger firms is that of statistical analysis of past losses. A risk management information system (RMIS) is a computer software program that assists in performing this task. Some characteristics of past losses that may prove to be important in this regard include the cause of loss, the particular employees (if any) involved, where the loss occurred, and the total dollar amount of the loss.

To illustrate how these factors can prove important, suppose a trucking company experiences several vehicle accidents involving the same driver. Upon further investigation, the firm may discover that it has several problem drivers because it is not adequately checking the driving records of its employment applicants. Similarly; a restaurant chain that experiences a large number of employee injuries at its Dallas location may have safety hazards present that warrant additional investigation. As risk management information systems become increasingly sophisticated and user-friendly, it is anticipated that more businesses will be able to effectively use statistical analysis in their risk management activities. The trend toward web-based access to RMIS also has enabled firms to provide systems access to decision makers throughout the firm. This improved access provides decision makers with immediate availability of important risk management information.

### **Risk Mapping or Profiling:**

With the evolution of integrated or enterprise risk management, alternative methods of risk identification and assessment have emerged. One such method is risk mapping, sometimes referred to as risk profiling. Since integrated risk management is based on identifying all the risks facing the firm, it is not unusual for a firm to identify in excess of 100 risks when using



this approach. Cataloguing and making sense of so many risks requires a structured process. Risk mapping or profiling involves arraying these risks in a matrix, with one dimension being the frequency of events and the other being the severity. Each risk is then marked to indicate whether it is covered by insurance or not. By considering the likelihood and severity of each of the risks in this matrix, as well as the extent to which insurance protection is already available, it becomes possible for the firm to identify the risks that are most likely to seriously affect the firm's ability to achieve its goals.

### Statistical Concepts:

Before discussing some techniques for statistically estimating loss frequency and severity, it is useful to review some essential concepts from the field of probability and statistics.

### Probability:

The probability of an event refers to its long-term frequency of occurrence. All events have a probability between 0 (for an event that is certain not to occur) and 1 (for an event that is certain to occur). To calculate the probability of an event, the number of times a given event occurs is divided by all possible events of that type. For example, if 150 accidents are observed to occur to 1,000 automobiles in operation, it can be said that there is a 0.15 probability of an accident ( $150 \div 1,000$ ). A probability distribution is a mutually exclusive and collectively exhaustive list of all events that can result from a chance process and contains the probability associated with each event. Thus, a risk manager may monitor the events (losses) that occur to a fleet of automobiles to determine how often losses of a particular size occur. The firm may then use that distribution to predict future losses.

### Measures of Central Tendency or Location

When risk managers speak of various measures of central tendency or location, they are concerned with measuring the center of a probability distribution. Several types of such measures exist, but the most widely used is the mean. Usually signified by the  $\bar{x}$ ; the mean can be defined as the sum of a set of  $n$  measurements  $x_1, x_2, x_3, \dots, x_n$  divided by  $n$ :

$$\bar{x} = \frac{x_1 + x_2 + x_3 + \dots + x_n}{n}$$

For example, the mean of the five values 1, 1, 2, 2, and 4 is  $(1 + 1 + 2 + 2 + 4) \div 5 = 10 \div 5 = 2$ . A related concept is the expected value. It is obtained by multiplying each item or event by the probability of its occurrence.

### Measures of Variation or Dispersion:

Because risk is synonymous with uncertainty, an extremely important statistical concept is that of variation from what is expected. The standard deviation, usually represented by the Greek letter  $\alpha$ , is a number that measures how close a group of individual measurements is to its expected value or mean.



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## Loss Distributions Used in Risk Management:

Probability distributions can be very useful tools for evaluating the expected frequency and/or severity of losses due to identified risks. In risk management, two types of probability distribution are used: empirical and theoretical. To form an empirical probability distribution, the risk manager actually observes the events that occur, as explained in the previous section. To create a theoretical probability distribution, a mathematical formula is used. To effectively use such distributions, the risk manager must be reasonably confident that the distribution of the firm's losses is similar to the theoretical distribution chosen.

Three theoretical probability distributions that are widely used in risk management are: the binomial, normal, and poisson.

## Integrated Risk Measures:

The assessment of risk in an integrated risk framework requires additional quantification techniques. One approach being used is value at risk (VAR). Value-at-risk analysis has been used by banks to quantify financial risk, but is increasingly being considered by other types of firms that wish to assess all types of risks in a coordinated framework. VAR analysis constructs probability distributions of the risks alone and in various combinations, to obtain estimates of the risk of loss at various probability levels. This type of analysis yields a numerical statement of the maximum expected loss in a specific time period and at a given probability level. The VAR approach is similar to the concept of maximum probable loss described previously, but it provides the firm with an assessment of the overall impact of risk on the firm.

One significant advantage of using VAR in enterprise risk management is that it considers correlation between different categories of risk. The relationship among different risks may either increase or decrease the overall effect of the risks facing an organisation. For instance, increases in unemployment can lead to increases in criminal activity and workers' compensation claims, and to decreases in a firm's sales. The combined impact of these three risks could be substantially different from what might be estimated by considering each risk alone. Ultimately, it is the net effect of risk that is critical to the ability of a firm to achieve its goals.

Another measure sometimes used in an enterprise-wide assessment of risk is risk-adjusted return on capital (RAROC). This approach attempts to allocate risk costs to the many different activities of the firm, such as products, projects, loans, and so on. In effect, RAROC assesses how much capital would be required by the organisation's various activities to keep the probability of bankruptcy below a specified probability level. As a result of RAROC, managers are forced to consider risk levels in evaluating the profitability of their decisions.

- Loss exposure checklists, financial statement analysis, flowcharts, contract analysis, on-site inspections of property, and the statistical analysis of past losses can be helpful in identifying risk.
- After risks are identified, they should be evaluated regarding their expected frequency of occurrence, the probable severity of associated losses, the maximum probable loss, and the maximum possible loss. Risk mapping is one way to catalogue the wide variety of risks identified.



- A probability distribution is a mutually exclusive and collectively exhaustive list of all events that result from a chance process. Risk managers use both empirical and theoretical probability distributions of losses in evaluating identified risks.
- The mean, median, and mode are ways of measuring the center of a probability distribution.
- The variance, standard deviation, and coefficient of variation are important ways of measuring the variation of actual from expected experience.
- Three theoretical distributions that are especially useful for risk managers are the normal, binomial, and poisson distributions.
- Value-at-risk (VAR) analysis involves the construction of probability distributions of risks alone and in various combinations to obtain estimates of the risk of loss at various probability levels.
- The law of large numbers indicates that as the number of exposure units increases, the degree of risk decreases. And, given a constant number of exposure units, as the chance of loss increases, the degree of risk decreases.
- When the probability of loss is very small, a larger number of exposure units are needed to achieve the same degree of risk than when the probability of loss is large.

### **Risk Avoidance:**

Risk avoidance is a conscious decision not to expose oneself or one's firm to a particular risk of loss. In this way, risk avoidance can be said to decrease one's chance of loss to zero.

Risk avoidance is common, particularly among those with a strong aversion to risk. However, avoidance is not always feasible and may not be desirable even when it is possible. Risk managers must always weigh the relative costs and benefits associated with activities that give rise to risks. When a risk is avoided, the potential benefits, as well as costs, are given up. For example, the doctor who quits practicing medicine avoids future liability risks but, also forfeits the income and other forms of satisfaction that may be associated with a career in medicine. The firm that avoids manufacturing pharmaceuticals relinquishes potential profits as well as liability risks. And if a business is to operate at all, certain risks are nearly impossible to avoid. An example is the liability risk of owning or leasing premises from which the business is conducted.

### **Loss Control:**

When particular risks cannot be avoided, actions may often be taken to reduce the losses associated with them. This method of dealing with risk is known as loss control. It is different than risk avoidance, because the firm or individual is still engaging in operations that give rise to particular risks. Rather than abandoning specific activities, loss control involves making conscious decisions regarding the manner in which those activities will be conducted. Common goals are either to reduce the probability of losses or to decrease the cost of losses that do occur.



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## **Types of Loss Control:**

Effective loss control sometimes requires technical knowledge of the exposure itself, as is the case with safety engineering in many manufacturing processes. In other instances, loss control measures may be quite simple and straightforward.

Two methods of classifying loss control involve focus and timing.

## **Focus of Loss Control:**

Some loss control measures are designed primarily to reduce loss frequency.

## **Timing of Loss Control:**

Some loss control methods are implemented before any losses occur. All measures with a frequency-reduction focus, as well as some based on severity reduction, are of this type; they are called pre-loss activities. One example is employee safety education programs, which are designed to reduce both the frequency and severity of injuries to workers. Although some firms may not realise the need for such programs until after a significant loss, the effectiveness of safety programs is meaningful only for prospective future losses.

The second timing classification for loss control measures is that of activities that take place concurrently with losses.

## **Risk Retention:**

A technique for managing risk, known as risk retention, involves the assumption of risk. That is, if a loss occurs, an individual or firm will pay for it out of whatever funds are available at the time. Retention can be planned or unplanned, and losses that occur can either be funded or unfunded in advance.

Planned retention involves a conscious and deliberate assumption of recognised risk. Sometimes planned retention occurs because it is the most convenient risk treatment technique or because there are simply no alternatives available short of ceasing operations. At other times, a risk manager has thoroughly analysed all of the alternative methods of treating an existing risk and has decided that retention is the most appropriate technique.

When a firm or individual does not recognise that a risk exists and unwittingly believes that no loss could occur, risk retention also is under way – albeit unplanned retention. Sometimes unplanned retention, occurs even when the existence of a risk is acknowledged. This result can ensue if the maximum possible loss associated with a recognised risk is significantly underestimated. For example, a manufacturer of kitchen appliances may recognise the potential for product liability suits. But the potential size of adverse liability judgments may be much greater than the manufacturer anticipates. Thus, even though the exposure is recognised, if the firm elects to purchase insurance based on its estimate of the maximum possible loss, it is engaging in unplanned retention of losses that exceed that estimate.



### **Funded versus Unfunded Retention:**

Many risk retention strategies involve the intention to pay for losses as they occur, without making any funding arrangements in advance of a loss. If a loss happens, it is paid for from the firm's current revenues. For example, a convenience food store may decide to absorb the expense of shoplifting losses as they occur, rather than making any special advance arrangements to pay for them. This unfunded retention makes sense in this situation, because some level of shoplifting losses is often viewed as part of the overall cost of doing business. Glass breakage is another exposure that many firms manage using unfunded retention. In general, unfunded retention should be used with caution, because financial difficulties may arise if the actual total losses are considerably greater than what was expected. In contrast to unfunded retention, a firm or individual may decide to practice funded retention by making various preloss arrangements to ensure that money is readily available to pay for losses that occur.

### **Credit:**

The use of credit may provide some limited opportunities to fund losses that result from retained risks. It is usually not a viable source of funds for the payment of large losses, however. Further, unless the risk manager has already established a line of credit prior to the loss, the very fact that the loss has occurred may make it impossible to obtain credit when needed. For example, creditors may be unwilling to loan money to replace destroyed assets if those are the very assets that normally would have been used as collateral for the loan. For these reasons, credit tends not to be a major source of financial resources for most firms' funded retention programs, except in cases where prior credit commitments have been arranged.

### **Reserve Funds:**

Sometimes a reserve fund is established to pay for losses arising out of risks a firm has decided to retain. If the maximum possible loss due to a particular risk is relatively small, the existence of a reserve fund may be an efficient means of managing risk. For example, a firm may set aside certain amount in liquid assets to pay for periodic repair or replacement of office equipment. Thus, when a fax machine or computer breaks down, the firm has funds readily available for the repair bill, which likely will be considerably less than the total reserve fund.

When the maximum possible loss is quite large, however, a reserve fund may not be appropriate. If a small employer plans for a Rs.21,50,000 reserve fund to pay for any hospital costs its employees incur, it has no way of knowing whether this fund is adequate. A single period of hospitalisation could easily exhaust the savings, and a second period of hospitalisation might occur before the fund could be restored. For this type of exposure, alternative risk management techniques probably would be more appropriate than risk retention, especially for a small firm.

### **Self-Insurance:**

If a firm has a group of exposure units large enough to reduce risk and thereby predict losses, the establishment of a fund to pay for those losses is a special form of planned, funded



retention known as self-insurance. Some people object to this particular term, because the word insurance usually implies that a risk is transferred to another party. Obviously, self-insurance will not involve a transfer of risk in this sense. In spite of such objections, the term self-insurance continues to be used to describe some special situations in which risk retention has been consciously selected as an appropriate risk management technique. There are two necessary elements of self-insurance: (1) existence of a group of exposure units that is sufficiently large to enable accurate loss prediction and (2) prefunding of expected losses through a fund specifically designed for that purpose.

### **Captive Insurers:**

One final form of funded risk retention is the establishment of a captive insurer, which combines the techniques of risk retention and risk transfer.

### **Risk Transfer:**

The final risk management tool is risk transfer, which involves payment by one party (the transferor) to another (the transferee, or risk bearer). The transferee agrees to assume a risk that the transferor desires to escape. Sometimes the degree of risk is reduced through the transfer process, because the transferee may be in a better position to use the law of large numbers to predict losses. In other cases the degree of risk remains the same and is merely shifted from the transferor to the transferee for a price. Five forms of risk transfer are hold-harmless agreements, incorporation, diversification, hedging, and insurance.

Risk transfer is another essential element of insurance. With the exception of self-insurance, a true insurance plan always involves risk transfer. Risk transfer means that a pure risk is transferred from the insured to the insurer, who typically is in a stronger financial position to pay the loss than the insured. From the viewpoint of the individual, pure risks that are typically transferred to insurers include the risk of premature death, poor health, disability, destruction and theft of property, and personal liability lawsuits.

### **Hold-Harmless Agreements:**

Provisions inserted into many different kinds of contracts can transfer responsibility for some types of losses to a party different than the one that would otherwise bear it. Such provisions are called hold-harmless agreements, or sometimes indemnity agreements. The intent of these contractual clauses is to specify the party that will be responsible for paying for various losses.

### **Incorporation:**

Another way for a business to transfer risk is to incorporate. In this way, the most that an incorporated firm can ever lose is the total amount of its assets. Personal assets of the owners cannot be attached to help pay for business losses, as can be the case with sole proprietorships and partnerships. Through this act of incorporation, a firm transfers to its creditors the risk that it might not have sufficient assets to pay for losses and other debts.



### **Diversification:**

While risk management might not be the primary motivation, many of the production decisions that a firm makes can serve to transfer risk. Diversification across various businesses or geographic locations, while frequently justified by business synergies or economies of scale, also results in the transfer of risk across business units. Additionally, this combining of businesses or geographic locations in one firm can even result in a reduction in total risk through the portfolio effect of pooling individual risks that have different correlations.

### **Hedging:**

Hedging involves the transfer of a speculative risk. It is a business transaction in which the risk of price fluctuations is transferred to a third party, which can be either a speculator or another hedger. For example, an airline faces significant price risk from fluctuation in the price of the jet fuel that it buys. The airline sells airline tickets well in advance of the date on which it promises to transport its passengers. The price that the airline pays for jet fuel on the day that it transports its passengers may either increase or decrease relative to the price on the date that it set its ticket prices, causing either profit or loss. The airline prefers to avoid the price risk and concentrate on its main business operation: transporting goods and passengers. Therefore, on the basis of the quantity of jet fuel it expects to buy, the airline enters into an equal and opposite transaction in the oil futures market whereby a speculator, in effect, assumes the price risk. The speculator agrees to take the price risk in the hope of making a profit on the total transaction. In other words, the speculator hopes to make the right guesses about price trends more often than not. The speculator is the risk transferee, and the transferor is usually a businessperson wishing to pass on a price risk to someone who is more willing and able to bear it. Alternatively, the third party opposite the transaction made by the airline may itself be a hedger. For example, because an oil company benefits from increases in the price of oil, its risk exposure with respect to oil prices is the mirror image of an airline's exposure to oil price risk. That means the oil company could hedge its exposure to oil price risk by taking a position in the futures market exactly opposite to that of the airline. In this case, both the oil company and the airline reduce their risk by investing on opposite sides of this futures market transaction. In addition to futures contracts, forwards, swaps, and options are other commonly used tools for hedging speculative risk.



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## PART - B

### Major Contents of Part B:

- Objectives of Risk Management; Steps in the Risk Management Process
- Strategic development and risk; Risk Analysis; Pure Risk; Objectives of Managing Pure Risk
- Cost of Risk; Cost of Losses; Cost of loss control; Cost of loss financing
- Cost of internal risk reduction methods

### Objectives of Risk Management:

Risk management has important objectives. These objectives can be classified as follows:

- Preloss objectives
- Postloss objectives

### Preloss Objectives:

Important objectives before a loss occurs include economy, reduction of anxiety, and meeting legal obligations. The first objective means that the firm should prepare for potential losses in the most economical way. This preparation involves an analysis of the cost of safety programs, insurance premiums paid, and the costs associated with the different techniques for handling losses.

The second objective is the reduction of anxiety. Certain loss exposures can cause greater worry and fear for the risk manager and key executives. The final objective is to meet any legal obligations. For example, government regulations may require a firm to install safety devices to protect workers from harm, to dispose of hazardous waste materials properly, and to label consumer products appropriately. The risk manager must see that these legal obligations are met.

### Postloss Objectives:

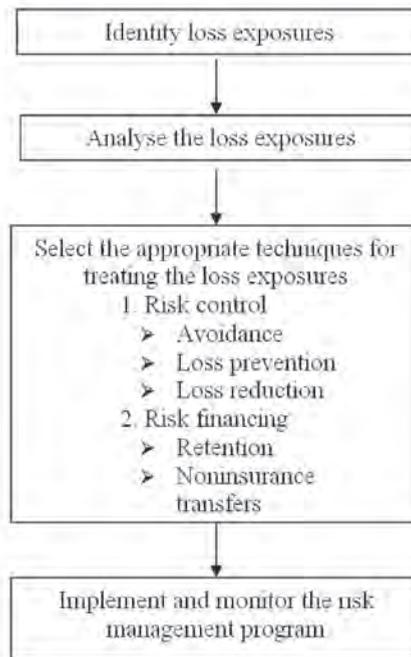
Risk management also has certain objectives after a loss occurs. These objectives include survival, continued operation, stability of earnings, continued growth, and social responsibility.

The most important postloss objective is survival of the firm. Survival means that after a loss occurs, the firm can resume at least partial operations within some reasonable time period.

The second postloss objective is to continue operating. For some firms, the ability to operate after a loss is extremely important. For example, a public utility firm must continue to provide service. Banks, bakeries, dairies, and other competitive firms must continue to operate after a loss. Otherwise, business will be lost to competitors.



### Steps in the Risk Management Process



The third postloss objective is stability of earnings. Earnings per share can be maintained if the firm continues to operate. However, a firm may incur substantial additional expenses to achieve this goal (such as operating at another location), and perfect stability of earnings may not be attained.

The fourth postloss objective is continued growth of the firm. A company can grow by developing new products and markets or by acquiring or merging with other companies. The risk manager must therefore consider the effect that a loss will have on the firm's ability to grow.

Finally, the objective of social responsibility is to minimise the effects that a loss will have on other persons and on society. A severe loss can adversely affect employees, suppliers, creditors, and the community in general. For example, a severe loss that shuts down a plant in a small town for an extended period can cause considerable economic distress in the town.

Though it may be difficult to outline specific targets for risk management, some broad objectives include:

- Mere survival,
- Peace of mind,
- Lower risk management costs and thus higher profits,
- Fairly stable earnings,
- Little or no interruption of operations,
- Continued growth,
- Satisfaction of the firm's sense of social responsibility desire for a good image, and
- Satisfaction of externally imposed obligations.



At a given point of time, a firm may not be interested in some of these objectives. Among the objectives in which they are interested they may place a higher value on attaining some objectives than others. Conflicts among the objectives may force the firm either to abandon or to scale down the level of some of those objectives. To illustrate, a firm may be interested in mere survival - not stable earnings or growth. Another firm may want survival and fairly stable earnings but may not seek growth. Peace of mind may be an objective, but may not be nearly as important as low risk management costs. The desire for a good image may be present but may not be a strong consideration. A firm that is initially interested in high growth rate may, after being informed of the cost of achieving this objective, abandon it or settle for a lower growth rate objective. A firm with a strong desire for peace of mind may re-evaluate its position if this is necessary to keep the cost within an acceptable level. External obligations may require certain reports and actions that cause the entity to spend more on risk management programmes. Similarly, the social responsibility objective may suggest some actions not supported, or at least in the short run, by the other objectives, thus forcing a re-evaluation of the relative importance of these objectives.

The risk management objectives are basically a function of:

- Corporate goals,
- The corporate environment, and
- Attributes peculiar to a particular organisation.

Risk Management policy should reflect the basic corporate goals of survival and profits adjusted to any specific emphasis on growth or stability. A stability objective suggests a conservative approach to risk management; a firm emphasizing growth might take more chances because it needs capital for expansion. The environment (clients, competitors, suppliers, and government) may be stable or shifting and homogeneous or heterogeneous. Businesses operating in a stable-homogeneous condition can adopt objectives that are complete, specific, all encompassing, and not subject to frequent review and evaluation. Businesses operating in an unstable environment have to select an optimal mix of objectives and make frequent reviews. Specific Company attributes that affect risk management objectives are:

- The company development and history;
- The personalities and experience of present management;
- The nature and amount of company assets and
- The nature of company operations.

Part of the task of risk management, therefore, is to determine the optimum mix of objectives. To determine this mix, the risk manager may have to examine the feasibility and desirability of numerous mixes.

Management of pure risk involves identification and evaluation of all significant pure risks and selecting methods for handling them with the objective of minimising the cost of risk. The views of senior management concerning the need for, scope, and importance of risk management and possible administrative efficiencies determine how the risk management function is structured and the exact responsibilities of units devoted to risk management. Most large companies have a specific department responsible for managing pure risk that is headed by the risk manager



(or director of risk management). However, given that losses can arise from numerous sources, the overall risk management process ideally reflects a coordinated effort between all of the corporation's major departments and business units, including production, marketing, finance, and human resources.

Depending on a company's size, a typical risk management department includes various staff specialising in areas such as property-liability insurance, workers' compensation, safety and environmental hazards, claims management, and, in many cases, employee benefits.

The risk management function is generally subordinate to and thus reports to the finance (treasury) department. This is because of the close relationships between protecting assets from losses, financing losses, and the finance function. However, some firms with substantial liability exposures have the risk management department report to the legal department. Firms also vary in the extent to which the risk management function is centralised, as opposed to having responsibility spread among the operating units. Centralisation may achieve possible economies of scale in arranging loss financing. Moreover, many risk management decisions are strategic in nature, and centralisation facilitates effective interaction between the risk manager and senior management.

### Strategic Development and Risk:

Developing a firm beyond its present product/market space exposes it to a combination of four sorts of risks. These risks are particularly acute where diversification is concerned because of the simultaneous novelty of both product and market.

- (a) **Market risk:** The firm has entered a new market where established firms already operate. The risks here are:
- not correctly understanding the culture of the market or the needs of the customer;
  - high distribution costs due to lack of economies of scale;
  - failure to be seen as credible by the buyers in the market due to lack of track record or brand;
  - exposure to retaliation by established firms with more entrenched positions.
- (b) **Product risk:** The firm is involving itself in a new production process which is already being conducted by rival firms: The risks this poses are:
- higher production costs due to lack of experience;
  - initial quality problems or inferior products causing irreparable harm to reputation in the market;
  - lack of established production infrastructure and supply-chain relations which will make costs higher and may limit product innovation and quality.
- (c) **Operational and managerial risk:** This boils down to the danger that management will not be able to run the new business properly. This carries with it the second danger that management will also be distracted from running the original business effectively too.



(d) **Financial risk:** This relates to the share price of the business. Shareholders are generally suspicious of 'radical' departures (and particularly diversification) for the following reasons:

- the product and market risks lead to volatile returns;
- the firm may need to write off substantial new net assets if the venture fails;
- the investment needed will reduce dividend and/or necessitate new borrowing;
- a diverse and unique portfolio makes it harder to compare the firm with others in the same industry when trying to evaluate its risks and returns.

The effect will be for the share price to decline to reflect the uncertainties created by the strategy.

### **Risk Analysis:**

Risk analysis is a simulation exercise that companies and its managers use to assess the relative attractiveness of alternative plans of investment. Alternative plans depend on many factors and inputs that may happen to change in future. Among these may be included the development of market, market sizes, currency position, fiscal policy, market growth rate, requirement of resources/ investment, selling prices, market share, operating costs and useful life of facilities. Risk analysis helps in evaluation of the plans that take into consideration the uncertainties related to the inputs.

By applying risk analysis, the analysts can develop a probability distribution for values of significant inputs. Then, sets of the inputs may be selected at random according to the changes they have of turning up in the future. The rate of return would be determined for each combination, and the process repeated until there is a clear vision of the investment. After careful evaluation of all pros and cons of alternative plans, the capacity of venturing to the risk factors at different risk levels, the most suitable one should be chosen. The levels of risks may put limits on the potential opportunities open to the organisation. These limits are the perceptions of some individuals as to the appropriate degree of risk acceptable for a particular action.

The risk factors to be used by a company should be consistent throughout the corporate strategy. They also must be consistent throughout the organisation. In certain situations, however, it may be difficult to follow the same format for the entire organisation.

Some examples of the use of risk analysis include:

1. To evaluate large and medium capital investment
2. To evaluate proposals for new product/process/technology
3. To evaluate opportunities for diversification
4. To evaluate merger/acquisition/joint venture opportunities
5. To evaluate the scope of corporate courtship

Risk analysis provides a systematic approach for evaluating strategic alterations by analysing



the uncertainties affecting the inputs. Simulation models and techniques are now widely used in risk analysis to investigate what would happen if the company used different assumptions, as well as to forecast the business environment and company's position in such an environment. Simulation for strategy formation includes evaluating a new product, evaluating planning alternatives, assisting research and development planning and project selection, and studying possible investments and consolidations. Standard computer programmes are also being developed to use this helpful way of looking at alternatives more accurately and precisely.

### Pure Risk:

The risk that can be insured is generally referred to as pure risk. The risk management function has traditionally focused on the management of pure risk. The major types of pure risk that affect businesses include:

- (1) **Property Risk:** The risk of reduction in value of business assets due to physical damage, theft, and expropriation (i.e., seizure of assets by foreign governments).
- (2) **Legal Liability Risk:** The risk of legal liability for damages for harm to customers, suppliers, shareholders, and other parties.
- (3) **Other Risks:**
  - The risk associated with paying benefits to injured workers under workers' compensation laws and the risk of legal liability for injuries or other harms to employees that are not governed by workers' compensation laws.
  - The risk of death, illness, and disability to employees (and sometimes family members) for; which businesses have agreed to make payments under employee benefit plans, including obligations to employees under pension and other retirement savings plans.
  - The risk of loss of services of one of key personnel on resignation/death.

### Features of Pure Risk:

Some common features of pure risk include the following:

- (1) **Huge potential losses:** Losses from destruction of property, legal liability, and employee injuries or illness often have the potential to be very large relative to a business's resources. While business value can increase if losses from pure risk turn out to be lower than expected, the maximum possible gain in these cases is usually relatively small. In contrast, the potential reduction in business value from losses greater than the expected value can be very large and even threaten the firm's survival.
- (2) **Pure risks are controllable:** The underlying causes of losses associated with pure risk, such as the destruction of a plant by the explosion of a steam boiler or product liability suits from consumers injured by a particular product, are often largely specific to a particular firm and depend on the firm's actions. As a result, the underlying causes of these losses are often subject to a significant degree of control by businesses; that is, firms can reduce the frequency and severity of losses through actions that alter the underlying causes (e.g., by taking steps to reduce the probability of fire or lawsuit).



- (3) **Insurability:** Pure risks can be insured. Businesses commonly reduce uncertainty and finance losses associated with pure risk by purchasing contracts from insurance companies that specialize in evaluating and bearing pure risk. The prevalence of insurance in part reflects the firm-specific nature of losses caused by pure risk. The fact that events that cause larger losses to a given firm commonly have little effect on losses experienced by other firms facilitates risk reduction by diversification, which is accomplished with insurance contracts.
- (4) **Lower probability:** The probability of occurrence of pure risk is low and less frequent. In contrast, the frequency and probability of occurrence of financial risk is high. For example, the fluctuations in the price of a commodity in the market place may be more frequent compared to the frequency of loss of stock of commodity itself.
- (5) **Not associated with offsetting gains:** Losses from pure risk usually are not associated with offsetting gains for other parties. In contrast, losses to businesses that arise from other types of risk often are associated with gains to other parties. For example, an increase in input prices harms the purchaser of the inputs but benefits the seller. Likewise, a decline in the rupees value against foreign currencies can harm domestic importers but benefit domestic exporters and foreign importers of Indian goods.

### Cost of Risk:

'Cost of risk' is a measure of potential loss from a risky situation. Risk is costly. Regardless of the specific meaning of risk being used, greater risk usually implies greater costs. The cost of pure risk has five main components: (1) expected losses, (2) the cost of loss control, (3) the cost of loss financing, (4) the cost of internal risk reduction, and (5) the cost of any residual uncertainty that remains after loss control, loss financing, and internal risk reduction methods have been implemented. The following Figure summarises these five components.

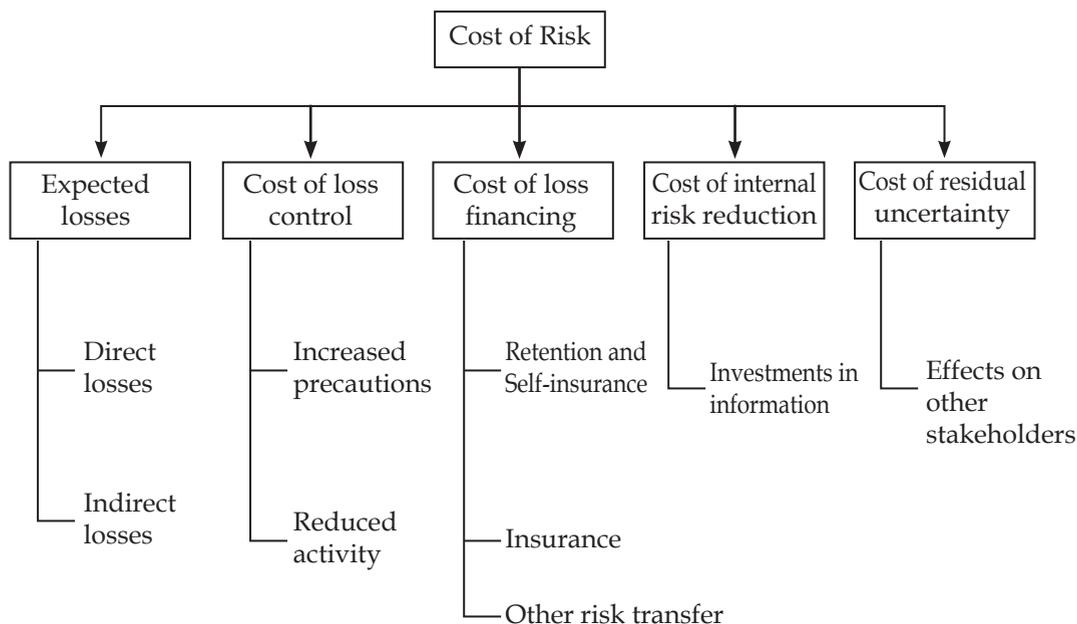


Fig.: Components of the cost of risk



**Cost of Losses:** The expected cost of losses includes the expected cost of both direct and indirect losses. Major types of direct losses include the cost of repairing or replacing damaged assets, the cost of paying workers' compensation claims to injured workers, and the cost of defending against and settling liability claims. Indirect losses include reductions in net profits that occur as a consequence of direct losses, such as the loss of normal profits and continuing and extra expense when production is curtailed or stopped due to direct damage to physical assets.

**Cost of loss control:** The cost of loss control reflects the cost of increased precautions and limits on risky activity designed to reduce the frequency and severity of accidents. For example, the cost of loss control for a pharmaceutical company would include the cost of testing the product for safety prior to its introduction and any lost profit from limiting distribution of the product in order to reduce exposure to lawsuits.

**Cost of loss financing:** The cost of loss financing includes the cost of self-insurance, the loading in insurance premiums, and the transaction costs in arranging, negotiating, other contractual risk, transfers. The cost of self-insurance includes the cost of maintaining reserve funds to pay losses. Note that when losses are insured, the cost of loss financing through insurance only reflects the loading in the policy's premium for the insurer's administrative expenses and required expected profit. The amount of premium required for the expected value of insured losses is included in the firm's expected cost of losses.

**Cost of internal risk reduction methods:** Insurance, hedging, other contractual risk transfers, and certain types of loss control can reduce the uncertainty associated with losses; that is, these risk management methods, can make the cost of losses more predictable. The uncertainty also can be reduced through investing in information to obtain better forecasts of losses. The cost of internal risk reduction includes the cost of obtaining and analysing data and other types of information to obtain more accurate cost forecasts. In some cases this may involve paying another firm for this information; for example, a pharmaceutical company may pay a risk management consultant to estimate the firm's expected liability costs.

**Cost of residual uncertainty:** Uncertainty about the magnitude of losses seldom will be completely eliminated through loss control, insurance, hedging, other contractual risk transfers, and internal risk reduction. The cost of uncertainty that remains (that is "left over") once the firm has selected and implemented loss control, loss financing, and internal risk reduction is called the cost of residual uncertainty.

### Objectives of Managing Pure Risk:

The cost of risk deduces the value of a firm's stock. The effects of risk and risk management on firm value before losses are known reflect their influence on (1) the expected value of net cash flows and (2) the compensation required by investors to bear risk. Much of basic financial theory deals with the kind of risk for which investors demand compensation and the amount of compensation required. Making risk management decisions to maximise business value requires an understanding of how risk and risk management methods affect (1) expected net cash flows and (2) the compensation for risk that is required by shareholders.

If the firm's cost of risk is defined to include all risk-related costs from the perspective of investors, a business can maximise its value by minimising the cost of risk.



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Cost of risk = [Value without risk] - [Value with risk]

Writing this expression in terms of the firm's value in the presence of risk gives:

Value without risk = Value with risk + Cost of risk

The value of the firm without risk equals the hypothetical value of the business in a world in which uncertainty associated with net cash flows could be eliminated at zero cost. This hypothetical value reflects the magnitude and timing of future net cash flows that would occur without risk and risk-related costs. This value is entirely hypothetical because risk is inherent in real-world business activities.

If a firm seeks to maximise value, it can do so by minimising the cost of risk. It accomplishes this by making the reduction in value due to risk as small as possible. Thus, as long as costs are defined to include all the effects on value of risk and risk management, minimising the cost of risk is the same thing as maximising value.

While the overall objective of risk management is to maximise business value by minimising the cost of risk, a variety of subsidiary goals are used to guide day-to-day decision making. Examples of these subsidiary goals include making insurance decisions to keep the realised cost of uninsured losses below a specified percent of revenues, purchasing insurance against any loss that could be large enough to seriously disrupt operations, making decisions to comply with stipulations in loan contracts on the types and amounts of insurance that must be purchased, and spending money on loss control when the savings on insurance premiums are sufficient to outweigh the costs. These types of rules generally can be viewed as a means to an end (i.e., as practical guides to increasing business value). However, in each case, there should be a reasonably clear link between the particular goal and the increase in value.



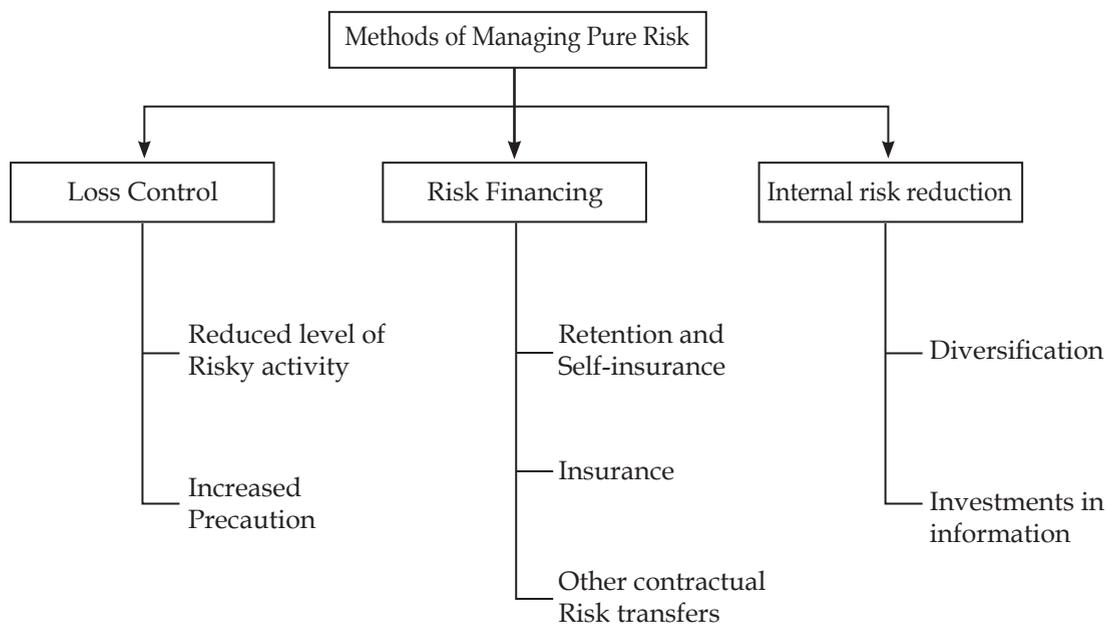
## PART - C

### Major Contents of Part C:

- Methods of Managing Pure Risk
- Loss Control
- Risk Financing
- Internal Risk Reduction
- Pooling of Losses

### Methods of Managing Pure Risk:

Following Figure summarises methods of managing pure risks. These methods can be broadly classified as (1) loss control, (2) risk financing, and (3) internal risk reduction. Loss control and internal risk-reduction commonly involve decisions to invest resources to reduce expected losses. They are conceptually equivalent to other investment decisions, such as firm's decision to buy a new plant or an individual's decision to buy a computer. Risk financing decision refers to decisions about how to pay for losses if they do occur.



**Fig.: Methods of managing pure risk**

- (1) **Loss Control:** there are two general approaches to loss control: (a) reducing the level of risky activity, and (b) increasing precautions against loss for activities that are undertaken. First, exposure to loss can be reduced, by reducing the level of risky activities, for example, by cutting back production of risky products or shifting attention to less risky product



lines. Limiting the level of risky activity primarily affects the frequency of losses. The main cost of this strategy is that it forgoes any benefits of the risky activity that would have been achieved apart from the risk involved. Exposure to losses can be completely eliminated by reducing the level of activity to zero; that is, by not engaging in the activity at all. This strategy is called risk avoidance.

As a specific example of limiting the level of risky activity, consider the case of Indian Tobacco Company (ITC) Ltd. that produces tobacco that might harm people. The company has taken steps to cut back tobacco production and entered into less risky businesses such as readymade garments.

The second major approach to loss control is to increase the amount of precautions (level of care) for a given level of risky activity. The goal here is to make the activity safer and thus reduce the frequency and/or severity of losses. Thorough testing for safety and installation of safety equipment are examples of increased precautions. The firm engaged in the service of transportation and tourism, for example, could give its drivers extensive training in safety, limit the number of hours driven by a driver in a day, and closely monitor to eliminate drunken driving. Increased precautions usually involve direct expenditures or other costs (e.g., the increased time and attention required to drive an automobile more safely).

- (2) **Risk Financing:** Methods used to obtain funds to pay for or offset losses that occur are known as risk financing (sometimes called loss financing). There are three broad methods of financing losses: (1) retention, (2) insurance, and (3) other contractual risk transfers. These approaches are not mutually exclusive; that is, they often are used in combination.

If the firm chooses retention, it retains the obligation to pay for part or all of the losses. For example, a tourism corporation might decide to retain the risk that cash flows will drop due to oil price increases. Retention often is called self-insurance. Firms can pay retained losses using either internal or external funds. Internal funds include cash flows from ongoing activities and investments in liquid assets that are dedicated to financing losses. External sources of funds include borrowing and issuing new stock, but these approaches may be very costly following large losses. Note that these approaches still involve retention even though they employ external sources of funds. For example, the firm must pay back any funds borrowed to finance losses. When new stock is issued, the firm must earn more profits to maintain the present level of earnings per share (EPS).

The second major method of financing losses is the purchase of insurance contracts. The typical insurance contract requires the insurer to provide funds to pay for specified losses (thus financing these losses) in exchange for receiving a premium from the purchaser at the inception of the contract. Insurance contracts reduce risk for the buyer by transferring some of the risk of loss to the insurer. Insurers in turn reduce risk through diversification. For example, they sell large numbers of contracts that provide coverage's for a variety of different losses.

The third major method of loss financing is to use one or more of a variety of other contractual risk transfers that allow businesses to transfer risk to another party. Like insurance contracts, the use of these contracts also is pervasive in risk management. For example, businesses that engage independent contractors to perform some task routinely



enter into contracts, commonly known as hold harmless and indemnity agreements that require the contractor to protect the business from losing money from lawsuits that might arise if persons are injured by the contractor.

- (3) **Internal Risk Reduction:** Businesses can reduce pure risk internally. There are two major forms of internal pure risk reduction: (a) diversification, and (b) investment in information. Regarding the first of these, firms can reduce risk internally by diversifying, their activities (i.e., not putting all of their eggs in one basket). For example, a passenger transportation company may diversify into goods transportation to expand its operations and reduce the incidence of risk of third party claims. The second major method of reducing pure risk internally is to invest in information to obtain superior forecasts of expected losses. Investment in information may also take the form of data collection and analysis of data relating to the risk of legal liability for damages for harm to customers, suppliers, and other parties.

### Pooling of Losses:

Pooling or the sharing of losses is the heart of insurance. Pooling is the spreading of losses incurred by the few over the entire group, so that in the process, average loss is substituted for actual loss. In addition, pooling involves the grouping of a large number of exposure units so that the law of large numbers can operate to provide a substantially accurate prediction of future losses. Ideally, there should be a large number of similar, but not necessarily identical, exposures units that are subject to the same perils.

Thus, pooling implies (1) are sharing of losses by the entire group, and (2) prediction of future losses with some accuracy based on the law of large numbers.

Losses can be predicted, objective risk is reduced. Thus, another characteristic often found in many lines of insurance is risk reduction based on the law of large numbers.

The law of large numbers states that the greater the number of exposures, the more closely will the actual results approach the probable results that are expected from an infinite number of exposures. Thus, as the number of random tosses increases, the actual results approach the expected results.

Although individual motorists cannot be identified, the actual number of deaths for the group of motorists as a whole can be predicted with some accuracy.

However, for most insurance lines, the actuary seldom knows the true probability and severity of loss. Therefore, estimates of both the average frequency and the average severity of loss must be based on previous loss experience. If there are a large number of exposure units, the actual loss experience of the past may be a good approximation of future losses. Objective risk varies inversely with the square root of the number of cases under observation: as the number of exposures increases, the relative variation of actual loss from expected loss will decline. Thus, the insurer can predict future losses with a greater degree of accuracy as the number of exposures increases. This concept is important because an insurer must charge a premium that will be adequate for paying all losses and expenses during the policy period. The lower the degree of objective risk, the more confidence an insurer has that the actual premium charged will be sufficient to pay all claims and expenses and provide a margin for profit.



## PART - D

### Major Contents of Part D:

- Ruin Probability
- Stakeholder needs and preferences
- Using the evaluation criteria
- Risk and Uncertainty – Decision Making
- Example of Subjective probabilities and expected value
- Risk Perception and Preference
- Managing Risk and Uncertainty
- The minimax/maximin criteria
- Expected values and its application and Action Evaluation

### **Ruin Probability:**

Ruin Probability is essentially a study of risk of insolvency for a company with multiple business activity facing heavy claims from creditors. For this purpose, the company is permitted to transfer resources between business lines. But such transfers are restricted by transaction costs. Insolvency or ruin occurs when the negative positions in one or more business lines cannot be compensated by capital transfers. Such problems are normally solved on the basis of intermittent or continuous process. Mathematically, actuarial calculations are involved in such exercise. A clear expression of Laplace transformation of the finite type, for computing ruin probability is one such method. Another model developed by Clayton Levy Copulas takes into consideration the interdependence of components of risk.

### **Stakeholder needs and preferences:**

This relates to the expectations and hopes of key stakeholders, the ability of the organisation to implement the strategy and achieve the desired results, and the willingness of stakeholders to accept the inherent risks in a particular strategy.

Strategic changes may affect existing resources and the strategies to which they are committed, gearing, liquidity, and organisation structures, including management roles, functions and systems. Shareholders, bankers, managers, employees and customers can all be affected; and their relative power and influence will prove significant. The willingness of each party to accept particular risks may vary. Trade-offs may be required. The power and influence of the strategic leader will be very important in the choice of major strategic changes, and his or her ability to convince other stakeholders will be crucial.



### Using the evaluation criteria:

The criteria can be used in a number of ways in the search for an appropriate balance and trade-off; it is rare that one strategic option will be the most appropriate, most desirable and completely feasible.

A company might well discern just which option or options are highly appropriate and desirable and then evaluate or test their feasibility. An objective review of internal resources and relative strengths and competencies could flag options which are appropriate and internally feasible. These can then be evaluated for external feasibility and desirability. Environmental scanning can be used to highlight opportunities which would be appropriate and externally feasible. These then need testing for internal feasibility and desirability, taking into account the risk element.

Sometimes a new window of opportunity will be spotted and all the criteria will need to be applied, possibly quite quickly.

The final choices and prioritisation may be difficult. There might be two feasible alternatives, one of which is highly desirable to certain stakeholders but logically less appropriate than the other for the organisation's overall strategy. Some organisations, particularly small companies and ones dominated by powerful, idiosyncratic leaders may be tempted to place desirability first. A strategic leader may have personal ambitions to develop the organisation in particular directions and in terms of growth targets. If the preferred strategy is implemented successfully, it will later be rationalised as highly appropriate.

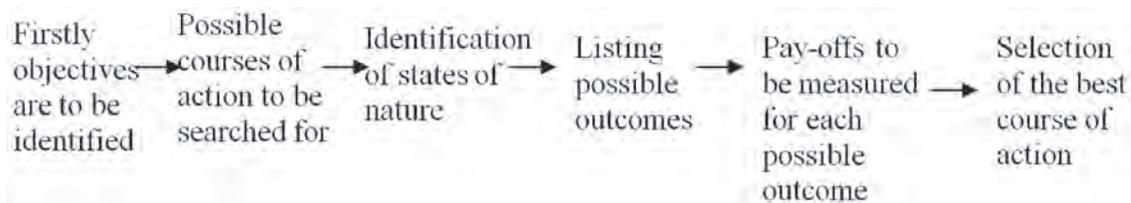
Conversely, a risk-averse company may have an acquisition opportunity which is strategically appropriate and feasible, but for cultural reasons is seen as undesirable.

It is important to stress again that a strategy must be implemented before it can be considered effective. The formulation may be both analytical and creative, and the strategy may seem excellent on paper, but the organisation must then activate it. The value of commitment and support from the strategic leader, managers and other employees should not be underestimated.

### Risk and Uncertainty – Decision Making:

While making decision relating to various business issues and specially at the time of preparing the budgets, managers often consider the 'most likely values'. Generally, apart from the known figures, managers have to make decisions based on uncertain estimates.

Diagram showing how decision is made in course of uncertainly:





A distinction may be made between 'risk' and 'uncertainty', where the former implies that 'chances of each outcome occurring is known' and the latter implies that in business field, the odds can only be guessed, i.e., can be estimated subjectively. There are mainly two ways to deal with uncertainty, i.e. (i) Sensitivity Analysis and (ii) subjective probabilities and 'expected values'.

In preparing 'budgets' and 'making-decision' the first step is usually to make a single 'best estimate' for each item. One might then also make 'optimistic' and 'pessimistic' estimates for each variable; though this does raise questions such as how to define 'optimistic' and 'pessimistic', and how to make use of the three estimates.

Another approach is to make the 'most likely' estimate for each item in turn, to see how much difference it makes to the overall result. Large changes to particular items will often not be important, so we need to identify those critical variable where even a fairly small change can make quite a large difference to the overall result.

It is not much use to try changing each item by a fixed percentage, say 10%, for some items may be much more variable, while others may be unlikely to change by nearly as much as 10%. A better method is to define an 'optimistic' estimate of income as one which would have only (say) a one in ten chance of being exceeded, while there would be only a one in ten chance of falling short of the 'pessimistic' estimate of income. (It would be the other way round for estimates of expenditure).

Ideally, one should allow for any inter-dependence among variables, though this is much easier said than done. But merely to combine the 'pessimistic' estimates of the most sensitive variables would be far too gloomy. If 'pessimistic' meant a one in then chance of a 'worst' outcome, for example, with four independent variables there would only be a one in 10,000 chance of such a combined outcome!

The likelihood that an event or state of nature will occur is known as its probability, and this is normally expressed in decimal form with a value between 0 and 1. A value of 0 denotes a nil likelihood of occurrence whereas a value of 1 signifies absolute certainty – a definite occurrence. A probability of 0.5 means that the event is expected to occur five times out ten. The total of the probabilities for events that can possibly occur must sum to 1.0.

#### Example of Subjective probabilities and expected value-

Sales volume	Probability	Expected sales Rs.	Profit / (Loss)	'Expected profit'
600	0.2	120	210	Rs. 42
400	0.1	40	90	Rs. 09
300	0.5	150	30	Rs. 15
100	0.2	20	(90)	(Rs. 18)
	1.0	330	240	48

Attaching subjective 'probabilities' to uncertain future events allows arithmetical manipulation of the numbers. It may even mislead people into thinking their decision-making is 'scientific'. But what confidence can we have in guesses about the chances of various outcomes? Can we



even be sure we have considered every possible event? (Events which in advance were thought to be 'impossible' often seem afterwards to turn out to have been 'inevitable').

The expected value (sometimes called expected payoff) is calculated by weighting each of the profit levels (i.e., possible outcomes) by its associated probability. The sum of these weighted amounts is called the expected value of the probability distribution. In other words, the expected value is the weighted arithmetic mean of the possible outcomes. The expected value calculation takes into account the possibility that a range of different profits are possible and weights these profits by the possibility of their occurrence. The expected value of a decision represents the long-run average outcome that is expected to occur if a particular course of action is undertaken many times. In addition to the expected values of the profits for the various alternatives, management is also interested in the degree of uncertainty of the expected future profits.

### **Risk Perception and Preference:**

Whose risk preferences should guide business decisions? Consider a major capital investment project in a division of a company organised into semi-autonomous investment centres. The project, let us suppose, conforms to overall company strategy, and if the division wants to go ahead with it, corporate management will be unlikely to object. But the project involves quite a large risk, in terms of what could go wrong and what might cost.

The problem is that what seems 'quite a large' risk to the division may seem small to the top management of a group with eight equally large divisions. Head office may think the expected return ample reward for the risk involved. But while division management's perception of the risk may be the same, its willingness to bear a particular risk may differ from head offices. In many firms, avoiding visible mistakes may seem more important than missing out on invisible (because never actually undertaken) profit opportunities.

Why should head office's risk preferences matter? Why shouldn't it be shareholders' risk preferences which determine what risks companies should be prepared to take? One possibility would be to let shareholders determine the amount of dividends payable, instead of boards of directors being entitled to retain profits inside companies entirely at their own discretion. This might prevent companies using funds unprofitably in order to reduce the risk in their own operations.

The point is that company managers may value 'survival' for themselves and their companies even though shareholders (and the economy as a whole) may benefit far more on balance if some companies do not survive! The question is: how can institutional arrangements encourage goal congruence? Preventing individual firms from going bankrupt by nationalising them all into one huge 'lame duck' may lead to a far more serious crash if the whole industry runs into trouble (as in the steel industry). Pretending that nationalised industries cannot be 'allowed' to fail implies expensive open-ended support from tax payers, which itself is possible only so long as enough profits are being earned elsewhere in the economy. What seems a low-risk short-term emphasis on security at all costs may turn out in the longer term to be a highly risky approach?

The risk-taker inside a company bears a different kind of risk from the external risk-taker. The internal risk-taker risks losing his job, or his chances for promotion; whereas the external risk-



take risks losing his capital (or some of it). The employee who loses job retains his skills, but loses his company-specific knowledge (which may be very valuable as long as he is employed by the company). The entrepreneur may lose some or all of his capital, but perhaps retains his alertness to profitable opportunities. Because the balance of risk is different in each case, the amount of possible reward is also likely to differ as between the internal and the external risk-taker.

### Managing Risk and Uncertainty:

Business risk refers to how a business invests its resources, financial risk to how it finances them. Financial risk means borrowing to finance net assets. It is 'risky' because the business is then legally committed to making the fixed interest payments regularly, and to repaying the amount borrowed on the due date. Such 'financial gearing' has the effect, for any fluctuation in profits before interest, of increasing the volatility of the profits-available for ordinary shareholders. In contrast, equity capital is less risky for the business, since it implies no legal commitments in terms of dividends or capital repayments.

Business risk can be reduced in a number of ways certainly not comprehensive, groups various kinds of uncertainty-reducing business activities into three categories:

- (a) Contractual;
- (b) Flexible;
- (c) Uncertainty-reducing.

Some actions may be regarded either as reducing risk or as increasing it, for example:

- (a) Diversifying into different (less well-understood) businesses;
- (b) Building spare capacity.

A general approach to reducing uncertainty may be to spend time, as well as money, in trying to gain information. This too may be risky. It is hard to avoid the conclusion that in a seam nearly all human action which commits re-resources in one way rather than another is speculative.

### The minimax/maximin criteria:

This is a conservative approach in the sense that the least worst outcome that could possibly occur is selected.

The following example shows the application of 'minimax' to costs.

Projects	Possible outcomes of costs			(Maximum costs) worst possible
	X. Rs.	Y. Rs.	Z. Rs.	
A	80	70	95	95
B	90	75	80	90
C	100	87	78	100

90 is the least worst possible outcome, and therefore project B will be selected.



The following example shows the Maximum applied to profits.

Projects	Possible outcomes of costs			(Maximum costs) worst possible
	X. Rs.	Y. Rs.	Z. Rs.	
A	50	70	90	90
B	60	55	80	80
C	75	65	85	85

65 is the best of the worst possible outcomes, and therefore project C will be selected.

**Note:** It can be seen that the minimax criterion minimises maximum costs, and the maximin criterion maximises minimum profits.

**(i) The minimax regret criterion.**

Under this criterion the difference between the outcome of a particular alternative and the best possible alternative computed. This difference will represent an opportunity loss. A regret table using the above example can be presented as under:

By subtracting each figure in a column from the largest figure in that column; for example,

Column X

$$75 - 50 = \text{Rs. } 25$$

$$75 - 60 = \text{Rs. } 15$$

$$75 - 75 = \text{Rs. } 0$$

Similarly for columns 'Y' and 'Z'.

Projects	X Rs.	Y Rs.	Z Rs.	Maximum Regret
A	25	0	0	25
B	15	15	10	15
C	0	5	5	5

5 represents the least opportunity loss (maximum regret) and therefore project C is chosen.

### Expected values and its application:

**(A) Pay-off matrices (decision tables).**

These should contain the following elements:

- (i) Events – possible states of being; for example, demand could be high or low.
- (ii) Probabilities – likelihood of the events occurring,



- (iii) Actions – alternative courses of action available to the firm.
- (iv) Objective function – assumed to be the maximisation of profitability.
- (v) Outcomes – the consequences of the various possible combinations of events and actions, and expressed in terms of expected values.

**Example:**

Zee Ltd. has a choice between three projects A, B, C. The following information has been estimated:

	Market demand (profits)		Rs. '000
	X	Y	Z
Project A	190	50	15
Project B	110	200	160
Project C	150	140	110

Probabilities are: X = 0.6, Y = 0.2, Z = 0.2

Which project should be undertaken?

**Solution:**

The elements of the matrix should be identified – profits, events (demand), probabilities, actions (projects A, B, or C), outcomes (EVs).

		Profit	Probability	Rs. '000
		Rs. '000		
Project A	X	190	0.6	114
	Y	50	0.2	10
	Z	15	0.2	3
				EV=127
Project B	X	110	0.6	66
	Y	200	0.2	40
	Z	160	0.2	32
				EV = 138
Project C	X	150	0.6	90
	Y	140	0.2	28
	Z	110	0.2	22
				EV = 140

Project C should be chosen because it has the highest EV of Rs. 40,000.

**(B) Perfect information:** Sometimes a firm may consider obtaining so-called perfect information from market researchers about future states of demand.



The maximum value of this perfect information will be equal to the EV with the information, less the EV without the information.

The value of the perfect information can be worked-out, considering the above example:

Demand	Choice	Profit Rs. '000	Probability	EV Rs. '000
X	A	190	0.6	114
Y	B	200	0.2	40
Z	C	160	0.2	32
EV with perfect information =				186

The value of the perfect information = 1,86,000 - 1,40,000 = Rs. 46,000

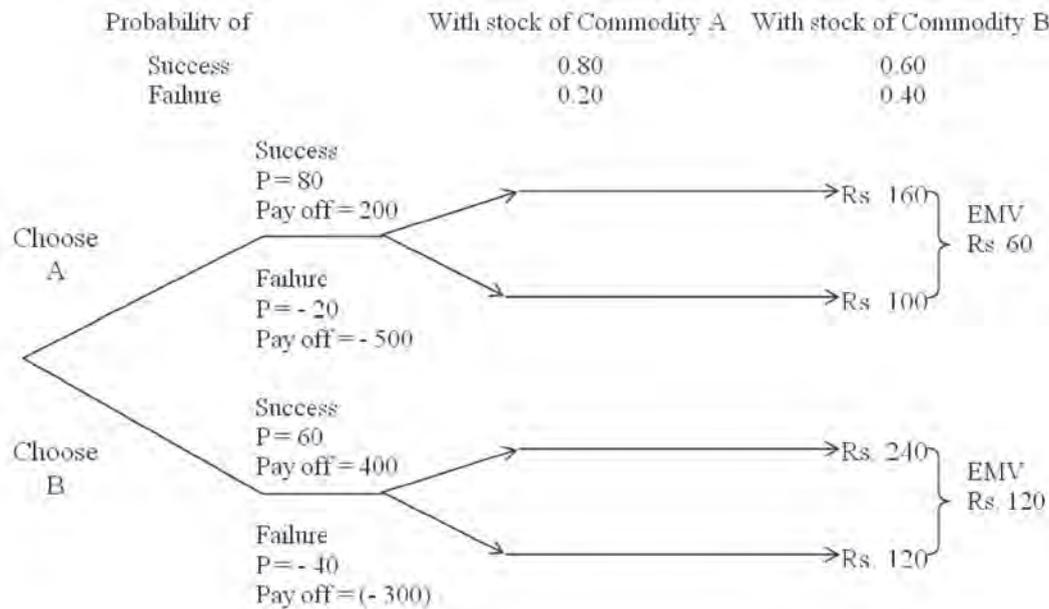
This sum of Rs. 46,000 represents a maximum value and Zee Ltd. would pay a proportion of this figure that reflects the degree of confidence which they have in the market researchers.

**(C) Decision-tree analysis.** A decision tree is a way of applying the expected value criterion to situations where a number of decisions are made sequentially.

Decision tree is a network which shows the logical relationship between different parts of a complex decision and the alternative courses of action in any phase of decision situation.

It is supposed a businessman wants to decide whether to stock commodity A or commodity B. He can stock either but not both. If he stocks A and if it is a success, he feels that he can make Rs. 200 but if it is a failure he will loose Rs. 500. If he stocks B and if it is a success he feels that he can make Rs. 400 but if it is a failure he would loose Rs. 300. The question is: which commodity A or B should be stocked?

He has the following probability distribution in view:



To read and interpret the above diagram, we would start at the origino. If we choose commodity A, we have an 80% chance of making Rs. 200 and 20% chance of losing Rs. 500. Our total expected pay off is Rs. 60. If we choose commodity B we have a 60% chance of making Rs. 400 and 40% chance of losing Rs. 300. Our total expected payoff is Rs. 120. Hence we should stock commodity B if we can have a stock of only one commodity.





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## STUDY NOTE - 7

### Risk Insurance

#### PART - A

##### Major Contents of Part A:

- Insurability of Risk and Insurance Contracts

#### **Insurability of Risk and Insurance Contracts:**

##### **Introduction:**

Insurance is defined as a co-operative device to spread the loss caused by a particular risk over a number of persons who are exposed to it and who agree to insure themselves against that risk. Insurance is a social device for eliminating or reducing the cost to the society of certain types of risk (Mowbray and Blanchard). Insurance has been well defined as “that social device for making accumulations to meet uncertain losses which are carried out through the transfer of the risks of many individuals to one person or to a group of persons” (Allan H. Willett). What is uncertain with regard to an individual, however, may be closely calculated when a group is involved.

In other words insurance is a cooperative form of distributing a certain risk over a group of persons who are exposed to it.

Dictionary of Business and Finance defines insurance as a form of contract or agreement and under which one party agrees in return for a consideration to pay an agreed amount of money to another party to make good for a loss, damage or injury to something of value in which the insured has a pecuniary interest as a result of some uncertain event.

Insurance may be defined as a contract between two parties whereby one party (the insurer) agrees to protect the other party (the insured) against a loss (which may arise or may not) when it takes place through the risk insured (in case of property or pay a fixed amount on the happening of a certain event (death or expiry of the term) in exchange of a fixed sum (premium).

The element of certainty of assurance is vital to every business and individual and insurance provides a way in which such certainty can be introduced.

From the functional standpoint, insurance is a social device whereby the uncertain risks of individuals may be combined in a group and this is made more certain by small periodic contributions by the individuals providing a fund out of which those who suffer losses may be reimbursed.

In its legal aspects it is a contract, the insurer agreeing to make good any financial loss the insured may suffer within the scope of the contract, and the insured agreeing to pay a consideration (Riegel and Miller).



Every plan of insurance is in its simplest terms, merely a method of spreading over a large number of persons a possible financial loss too serious to be conveniently borne by an individual. (Josaph B. Maclean).

Insurance is a device for transfer of risks of individual entities to an insurer, who agrees for a consideration (called the premium), to assume to a specified extent losses suffered by the insured (Dr. W.A. Dinsdale).

Insurance is a special device. It tries to reduce the cost of loss to society by reducing risk. It accumulates funds to meet individual losses. The fund is the way of transferring individual loss to a group. The loss was uncertain from individual's side. But for a group the loss becomes certain. It is a mechanism of spreading risk falling on one over many facing the same risk. In legal sense one promises to make good the loss of another for a small but regular fixed payment. This is business of insurance. Insurance cannot stop an event to happen. Even if we insure loss of fire or storm or accident it will take place. But the loss to the individual will be reduced. Society will get a replacement of the asset which was lost.

The underlying principle of insurance is spreading of risks; i.e., losses suffered by few are distributed over the many, thereby removing from individual economic consequences of risks. A loss by say, fire, effects not only owner of the property but also other traders, creditors, employees through insurance, the owner substitutes known factor, i.e., Premium, for an insured events from happening, make good or mitigate the pecuniary loss to a certain extent.

“General Insurance Business” means fire, marine or miscellaneous Insurance Business, whether carried on singly or in combination with one or more of them.

“Fire Insurance Business” means the Business of effecting, otherwise than incidentally to some other class of Insurance. Business, contracts of Insurance against loss by or incidental to fire or other occurrence customarily included among the Risks Insured against in fire Insurance policies.

“Marine Insurance Business” means the Business of effecting contracts of insurance upon vessels of any description, including cargoes, freights and other interest which may be legally insured, in or in relation to such vessels, cargoes and freights, goods, wares, merchandise and property of whatever description insured for any transit by land or water or both and whether or not incidental to such transit, and includes any other risks customarily included among the risks insured against in marine insurance policies.

“Miscellaneous Insurance Business” means the business of effecting contracts of insurance which is not principally or wholly of any kinds included in life Insurance Business, Fire Insurance Business, and Marine Insurance Business; The scope of miscellaneous insurance business or Accident Insurance is therefore very wide and continuously expanding since it comprises all other sections of General Insurance Business which are not covered in fire and marine departments. New forms of cover are constantly being divided and protections afforded by existing classes of policies are frequently extended to meet the changing needs of the present day conditions. The various classes of business in Accidents Insurance have their own particular features which call for special treatment.

Insurance plays a crucial role in every risk management programme. Whether it is the sole funding mechanism or used in combination with a self insurance programme, insurance will



almost always represent the ultimate hedging device. Decisions regarding the use of insurance should be made first on the basis of coverage and service needs, and second on the basis of price.

Insurable risks, which have been identified and measured, can either be retained or transferred. There are two circumstances by which one retains risk: one is voluntary and the other involuntary. Voluntary risk: retention is most often selected as an alternative to insurance. For example, to retain auto collision risks as opposed to buying insurance is an illustration of voluntary retention of risk. Involuntary retention concerns risks for which there is no or an extremely limited transfer (insurance) alternative available: for example, pollution, nuclear and war risks.

Many companies now combine insurance with retention in the form of funded reserves. These reserves are allocated on the balance sheet for the sole purpose of offsetting losses. Funded reserves are essentially appropriate for covering small, fairly predictable losses. However, neither funded reserves nor self-insurance are tax deductibles nor are such reserves usually large enough to cover catastrophic losses.

To deal with these problems, many large companies have formed insurance subsidiaries known as captives. The idea is not new. Many of today's mutual insurance companies were originally industry captives. Captive formation gained favour during the 1970s because of tight markets, first for property and later for liability lines of insurance. A major advantage is that the captive, as an insurance company, has direct access to reinsurance markets.

### **Functions of Insurance:**

We have already known that insurance is very important for modern age. Functions and services rendered by insurance will show us its importance. Everybody knows insurance, as a business is very big in size. As an institution it has very wide scope and various types of transaction. But we must know what insurance does? Insurance is now a social institution.

Social institutions impart two types of benefits. One becomes visible and everybody knows, but the other one may give benefits indirectly. So some benefits are enjoyed by every member of society without knowing that insurance has given this. Different types of insurance give some common benefits. This is available to the buyer of policy. These two classes of people belong to society. We shall see these two aspects of insurance benefits and the important part played by insurance in business enterprise. The different benefits will be discussed under several headings.

### **Benefits to Individual and Society:**

#### **Individual**

- (a) **Financial security to an individual.** Insurance guarantees protection against large and uncertain losses in return of small but certain payment. This service is common to all forms of insurance. Each insurance gives protection against a particular risk. The insured (may be businessman) contracts to pay a small premium at fixed interval. The insurance company assumes on his behalf the risk of large but uncertain losses. One example of how uncertainly



to an individual can be converted to a certainly within a group is given below.

One individual knows from experience that fires are destroying business properties and stock of goods; he cannot tell when own property will suffer. If he can know the future loss accurately he may make provision without depending upon insurance. Insurance calculates and finds that certain houses per hundred catch fire every year. Then it makes provision for those owners through some calculation, this element of certainly or assurance is vital to every business and individual. Insurance provides one way of such certainly. All other forms of insurance like life, marine, accident, or liability do the same service. They assume different or liability do the same service. They assume different risks but on the same principle of group statistics. We find out that personal accident and sickness insurance gives financial protection when individual is unable to earn. Fire insurance protects, cargo thus relevant policies provide the necessary financial protection.

- (b) **Insurance provides assistance to business enterprise.** There is heavy capital investment in modern industry especially in building, machinery, plant equipment's. This investment is exposed to loss or damage by fire, theft, accident and other perils. The provision for these losses may be very costly. Business enterprises may have to black large amount of capital as insurance fund if they themselves have to meet the risk. But insurance gives procession to these properties in return for a small payment called premium. This gives many advantage to businessmen.

- They need not have self insurance provision.
- They save cost and blocking capital or capital is released.
- Properties got security.

We can examine the following and find how insurance assists business.

Shipping business involves heavy capital investment. The ship owner cannot venture to expand its fleet due to his worry and anxiety about losses. Insurance or hull takes away much of these worry of the owner. Insurance eliminates harmful consequences of risk and encourages business to assume more risk. Uncertainly about future is a handicap to economic progress. Insurance removes the fear, worry and anxiety associated encourages industrial and commercial development and contributes to a vigorous economy and national productivity.

- (c) **Financial stability to commerce, and industry.** A serious loss will not only cause material damage to buildings, plant and machinery, but production will be disturbed with other consequences like loss of profit, unemployment or loss of trade. So a loss affects the owners of properties and others also. Loss of profits insurance in fire and engineering protect against consequential losses. It covers net stoppage of production. These classes of insurance lend stability. This helps society to maintain economic equilibrium.
- (d) **Basis of Credit.** Modern business prospers on credit. We may say credit is the mainstay of business expansion. This has become possible due to insurance.

**Mortgagee real estate.** No mortgagee is willing to lean money unless he knows that property is protected against fire.



**Retailer and wholesaler:** No manufacturer advances or gives goods on credit to wholesaler or a wholesaler to his retailer unless he knows that goods are insured against fire. The banks these days are giving credit in large scale. They allow loans against goods if they know they are insured in addition to other conditions, again dealer can use his grain as security for a bank loan if that is insured. In international financial transactions three documents are most common (in international transactions) a draft, a bill of lading and a marine insurance certificate. A bill of lading gives security to a draft. That means are loaded for which draft is made. The marine insurance lends protection to the goods mentioned in the bill. Business persons may take loan on the basis of these documents from banks.

So far fire and marine insurance are well known as bases of credit. But we find that other forms of insurance may also become basis of credit. Two such instances are life insurance and credit guarantee insurance. Life of the business person is the spirit behind the properties of the business. That needs protection. Another important asset is accounts owing to other concerns- the debtors. These debits fluctuate in value depending upon the business conditions and the character of debtors. These debts must be covered by a credit insurance policy before they are accepted for advancing credit. Still another case is that of the character and integrity of servants. A business may be ruined by the dishonesty of an employee. That needs to be insured by fidelity guarantee insurance. So it seems, every form of insurance is a basis of extending credit to a firm. The majority of road transport vehicles, are bought with finance is a precondition for such credit granted by the creditor. The government for such business, the importer opens a letter of credit on a bank authorising the exporter to draw on the importer a bill of exchange against the value of shipment of goods. The bank advances credit by discounting the bill only if insured earlier for goods mentioned there.

**(e) Insurance plays a vital part in the reduction of losses.**

Insurance encourages to reduce loss in many ways.

- (i) Through rating methods: Rating or premium charged to undertake insurance itself is helpful for reducing loss by lowering premium and negatively by charging higher premium for undesirable features of risk. In fire insurance for example, extra rates are charged for inferior construction and discounts are allowed for improvement in risk e.g. fire extinguishing appliances. In motor insurance the provisions of excess and offer on claim discount are such reduction provisions. Marine insurers allow lower rates for good packing to encourage loss reduction.
- (ii) Insurers join different agencies engaged in loss prevention works (fire, cargo loss presentation and industrial and road safety): A few of such agencies started by insurers are.
  - Loss prevention Association of India. It works for increasing awareness among people for loss prevention and implementing various measures for loss prevention.
  - The salvage corps of loss prevention Association of India. It works with the fire brigades when fire occurs. Fire brigade subsides the fire; the salvage corps save future damage by water, smoke and heat. It saves goods for deterioration future.
  - Survey and inspection of risks. Insurers arrange survey and inspection of risks before



acceptance in fire, engineering and accident. The surveys suggest risk for rating and also recommend improvements. This reduces potentiality of loss.

- Specialized Knowledge and Experience of Risks. Insurance out of long years in business acquire special knowledge on different classes of risks.

It includes special knowledge on process of manufacture of an article, the physical and chemical properties of materials, methods of the fire extinction, packing, trade routes, port conditions etc. third knowledge renders vital services to the community in minimising economic waste.

- (f) **Insurance provides funds for investments.** Some forms of insurance combine with insurance feature, an investment element. It is incidental only. But it serves very useful purpose. Life insurance usually collects money in the early period forms and insured under level premium plans. The insurance company can invest these funds in bonds and securities. In other forms of insurance also insurers may utilise a part of fund-the excess of funds received over current expenses, liabilities, and reserves in government securities, municipal bonds, loans, mortgages and equities. Thus capital is provided to the government and the industry.

It helps public in two ways:

- They contribute to the wealth of the nation by increasing economic development and
- By reducing the cost of insurance. Because investment income is adjusted in the value of future premiums. That means by the amount if investment income premium are reduced.

- (g) **Insurance earns foreign exchange.** Insurance is based on correct distribution of cost. It is based on large number of risks. It must have a systematic method of determining premiums. Customers are interested in overseas countries particularly in the Middle East, Africa and South-East Asia through branches.
- (h) **Insurance tries to distant cost equitably.** Modern method of insurance is based on correct distribution of cost. It is based on large number of risks. It must have a systematic method of determining premiums. Customers are interested in correct cost. Insurance companies employ expert mathematicians, actuaries to find insurance premiums of factors are considered for, fixing premiums. Only under an organised system of insurance these things can be done. The systematic cooperation of many to share the loss of a few cannot be done without insurance plan.
- (i) **Capitalisation of earning powers.** This is way of expression. It tells certain incomes in terms of capital value. Suppose a machine income of Rs.2000 after repairs, depreciation and interest on its value. Its life is 25 years. Its capital value is  $2000 \times 25 = \text{Rs.}50000$ . The same method may be applied to human life. The points to be considered are probable life time if the earner, percent of employment at different age, and loss in earning of that persons and present value of future incomes. This is calculated by actuaries. This capital is a loss to the family if the person dies. In business it is a capital loss is of the same nature as that of allowances for depreciation whereas depreciation is a natural foreseen contingency. Insurance protects this valuable human capital and adds importance to its value.



- (j) **Insurance makes savings possible.** It is a hedge-a cover for wrong decision very much familiar in business transitions. Savings plans are beneficial to them who (I) are fortunate to survey till the full planned amount is achieved. And (II) are steaminess able to contain the savings till the end without difficulty of outside help. Insurance assures a savings and guarantees the amount.

**Some firms prefer self-insurance.** They set a part of income every year in a separate fond. It is a protection fund against loss. It has certain risk. If a fire or large compensation damage suits it to be faced sooner then expected, the self-insurance fund may be insufficient to meet the loss. Insurance precedes a hedge for such a risk. The business persons can assume self-insurance slowly until they are fully equipped with plus 9/10 insurance, then 5/10 self-insurance to saving against uncertain loss. Insurance premiums are free of tax expenditure. So it is a saving.

- (k) **Insurance promotes thrift.** This is more clearly found in life Insurance. Because in life insurance there is provision for advance notice short period before due date of premium due, and provision against withdrawal. In non-life insurance the money paid to insurance company leaves certain margin of excess of income i.e., premium over the actual expenditure. The excess is kept as a reserve. This would otherwise have not been available. This is a by-product of insurance. The individual small saving may be consumed in expenditure but insurance company change its character to a community saving.

## To Society:

- (1) **Community benefits of insurance.** Insurance gives many benefits. Some of these are direct and quite apparent. Others are indirect and remote; we enjoy these benefits but cannot appreciate. Direct benefits go to insurer and insured. When many such persons enter into agreements they create other indirect benefits. We discuss some of these. So far the benefits described are individual in character. Benefits accrued to, individual policy holder who paid the premium. Insurance also performs certain services which are not meant to benefit any particular individual. The benefits have the effect of community benefit. Among these services, the following may be mentioned:
- Fire and other property insurance provide for the present and also for future events that may be anticipated. Adequate future provision is that sign of a civilised society, and marks the difference between stability and instability in business. It increases sense of responsibility and strengthens community connections. Property and casualty insurance are attempts to stabilize business conditions and property rights.
  - Insurance fulfils certain needs for which state might have to provide. The provision for old age, sickness and disability of persons in general. All forms of insurance lessen the number of persons who are rendered destitute through misfortune. They are able to maintain the standard of living. They reduce the destitution and misery. These could lower the ideals and standards of conduct of entire communities.
  - A well organized system of insurance tends to distribute equitably the cost of accidental events. In the absence of insurance this would have been paid in a haphazard manner. For example, the cost of the insurance is reflected in house rent. In the absence of insurance some tenants would pay higher rents others.



- All forms of insurance tend to reduce the extent of evils they are meant to alleviate. The most effective argument for reduction of fire losses is that smaller losses will make smaller premiums possible.
- Insurance accumulates from the small deposits of many persons, a large fund that may be invested and used in the development of Indian enterprise. In other words, vest funds are made available as capital which otherwise would never be brought together in one place. The reserves of life, fire, compensation and casualty insurance companies represent the contribution of millions. Each of these contributions is insignificant, but in total they amount to a gigantic amount. This vast sum is distributed among the securities of government and non-government enterprises. Between the time of insurance contract and the time of the event of loss the insurance carrier works as a bank or an investment trust.

### Increases Business Efficiency:

It is common knowledge that if risk and uncertainty is reduced efficiency will rise. Efficiency is measured by the price of goods. The prices go down if risk is reduced. On the other hand, the most uncertain is the most inefficient business. The proprietors of such enterprises against remain busy and other much over large financial risks are transferred co-insurance underwriters then owner will look of details of production and increase efficiency. Now he is able to face his competitors. The ways to increase efficiency are many. Some of them are:

- **Insurance in export trade.** Young entrepreneurs fully tainted, do not take up trade due to transportation risk, fire and dishonesty. Insurance relieves them of such uncertainties.
- **Delegation of work.** Employees will not entrust large sums of money and important duties to subordinates unless they make sure that such losses can be reimbursed. If they don't delegate, their energy will be wasted on small matters which servants may do.
- **Partnership dissolution.** If one partner dies his heirs must get back to deceased partner's share. But immediately money may not be available insurance may solve the problem and remaining partners need not worry about funds.
- **Employees Co-operation.** Employers can have good relation with employees by insuring employees against life, accident, and sickness etc. satisfied persons are best workers.

Insurance helps small business to compete successfully with the large enterprises. Element of risk is very high in business. A small business cannot afford to take much risk. A large business may be able to maintain a self insurance fund, because its resources are great enough and its risks are sufficiently diversified and distributed and to make such a fund effective. But for a small business such fund is a pure example. Insurance is therefore a special benefit to small manufacturer, merchant and property owner.

### Basic Parts of an Insurance Contract:

Despite their complexities, insurance contracts generally can be divided into the following parts:



- Declarations
- Definitions
- Insuring agreement
- Exclusions
- Conditions
- Miscellaneous provisions

Although all insurance contracts do not necessarily contain all six parts in the order given here, such a classification provides a simple and convenient framework for analysing most insurance contracts.

### **Declarations:**

The declarations section is the first part of an insurance contract. Declarations are statements that provide information about the property or activity to be insured. Information contained in the declarations section is used for underwriting and rating purposes and for identification of the property or activity to be insured. The declarations section usually can be found on the first page of the policy or on policy insert.

In property insurance, the declarations page typically contains information concerning the identification of the insurer, name of the insured, location of the property, period of protection, amount of insurance, amount of the premium, size of the deductible (if any), and other relevant information. In life insurance, although the first page of the policy technically is not called a declarations page, it contains the insured's name, age, premium amount, issue date, and policy number.

### **Definitions:**

Insurance contracts typically contain a page or section of definitions. Key words or phrases have quotation marks (“ . . .”) around them or are in boldface type. For example, the insurer is frequently referred to as “we,” “our,” or “us.” The insured is referred to as “you” and “your.” The purpose of the various definitions is to define clearly the meaning of key words or phrases so that coverage under the policy can be determined more easily.

### **Insuring Agreement:**

The insuring agreement is the heart of an insurance contract. The insuring agreement summarizes the major promises of the insurer. The insurer, in other words, agrees to do certain things, such as paying losses from covered perils, providing certain services (such as loss-prevention services), or agreeing to defend the insured in a liability lawsuit. The promises of the insurer and the conditions under which losses are paid are described in the insuring agreement. There are two basic forms of an insuring agreement property and liability insurance: (1) named-perils coverage and (2) “all-risks” coverage. Under a named-perils policy, only those perils specifically named in the policy are covered. If the peril is not named, it is not covered. For example, in the home-owners policy, personal property is covered for fire, lightning, windstorm, and certain



other named perils. Only losses caused by these perils are covered.

Flood damage is not covered because flood is not a listed peril.

Under an “all-risks” policy, all losses are covered except those losses specifically excluded. “All-risks” policies are also called an open-perils policy and a special coverage policy. If the loss is not excluded, then it is covered. For example, the physical damage section of the personal auto policy covers losses to a covered auto. Thus, if a smoker burns a hole in the upholstery, or a bear in a national park damages the vinyl top of a covered auto, the losses would be covered because they are not excluded.

“All-risks” coverage is generally preferable to named-perils coverage, because the protection is broader with fewer gaps in coverage. If the loss is not excluded, then it is covered. In addition, a greater burden of proof is placed on the insurer to deny a claim. To deny payment, the insurer must prove that the loss is excluded. In contrast, under a named-perils contract, the burden of proof is on the insured to show that the loss was caused by a named peril. Insurers and rating organisations generally have deleted the word “all” in their “all-risks” policy forms or use special terminology. In the homeowners policy drafted by the Insurance Services Office, the phrase “risk of direct loss to property” is now used instead of the term “all-risks.” However, this term is interpreted to mean that all losses are covered except those losses specifically excluded. Likewise, the Insurance Services Office has drafted a special-causes-of-loss form that is used in commercial property insurance. Once again, this terminology is interpreted to mean that all losses are covered except those losses excluded. The deletion of any reference to “all-risks” is intended to avoid creating unreasonable expectations among policyowners that the policy covers all losses, even those losses that are specifically excluded.

Life insurance is another example of an “all-risks” policy. Most life insurance contracts cover all causes of death whether by accident or by disease. The major exclusions are suicide during the first two years of the contract; certain aviation hazard exclusions, such as military flying, crop dusting, or sports piloting; and in some contracts, death caused by war.

### Exclusions:

Exclusions are another basic part of any insurance contract. There are three major types of exclusions: excluded perils, excluded losses, and excluded property.

**Excluded Perils:** The contract may exclude certain perils, or causes of loss. In a homeowner’s policy, the perils of flood, earth movement, and nuclear radiation or radioactive contamination are specifically excluded. In the physical damage section of the personal auto policy, collision is specifically excluded if the car is used as a public taxicab. In property and liability insurance, most insurance contracts exclude coverage for acts of war. The war exclusion clause is important today because of the terrorist attack on the United States on September 11, 2001, which raised questions whether insurers would pay such claims.

**Excluded Losses;** Certain types of losses may be excluded. For example, in a homeowner’s policy, failure of an insured to protect the property from further damage after a loss occurs is excluded. In the personal liability section of a homeowner’s policy, a liability lawsuit arising out of the operation of an automobile is excluded. Professional liability losses are also excluded; a specific professional liability policy is needed to cover this exposure.



**Excluded Property:** The contract may exclude or place limitations on the coverage of certain property. For example, in a homeowner's policy, certain types of personal property are excluded, such as cars, planes, animals, birds, and fish. In a liability insurance policy, property of others in the Care, control, and custody of the insured is usually excluded.

## Principles of Insurance:

Insurance principles are inevitable. It is important to the contract of insurance.

Insurance is a contract based on certain principles. It must be observed in every insurance contract. Without these have no legality will be void.

The principles of insurance can be divided into two parts:

- i. Primary Principles, and ii. Legal Principles

### (i) Primary Principles:

Primary principles are as follows

- Principle of co-operation
- Principle of probability

These two principles are the main legs of the insurance.

1. Principle of co-operation: Insurance is based on co-operative endeavour. The risk of an individual is to be shared by many so as to reduce the share of an individual. "Insurance is pre-eminently social in nature. It represents the highest degree of co-operation for mutual benefits".
2. Principle of probability: Another principle on which the insurance is based is the theory of probability'. To understand this principle we take an example; suppose a coin is thrown into the air. Then probability of its being on head side is 50% coin one hundred times, there is probability that it may give the same results, i.e. 50% heads and 50% tails. The insurance companies collect the date of previous happenings taking the large number of years into consideration and from an idea for the future likely events. They prepare that mortality tables and accordingly the premium is calculated.

### (ii) Legal Principles:

Legal principles are essential for the validity of the insurance contract in the absence of any legal principle the contract of insurance becomes void. The legal principle are as under:

1. The principle of insurable interest
2. The principle of utmost good faith or uberrimae fidei
3. The principle of indemnity
4. The principle of subrogation
5. The principle of Contribution
6. The principle of Causa proxima.



## Elaboration of Legal Principles of Insurance:

A contract of insurance comes into existence when there is an offer or proposal on one side and acceptance of the same by other. It has to satisfy all the essential elements of a simple contract. The contract of insurance must be entered into by a competent person in order to be valid. The competent person must be of the age of majority according to law and of sound mind. Premium is the consideration that must be given for commencement of the insurance contract. The object of the contract should be lawful. Free consent is also one of the essential features of the contract of insurance. Every person entering into an insurance contract should enter into it by free consent.

### (1) Utmost Good Faith:

Utmost good faith is the basis of contract of insurance. It requires that both the parties involved in an insurance contract should make disclosure of all material facts and figures relating to the subject matter of the insurance contract. If utmost good faith is not disclosed by either party the contract may be avoided by the other. The insured's duty is to disclose all material facts known to him but unknown to the insurer. Similarly, the insurer's duty of utmost good faith is disclosing the scope of insurance at the time of contract. Any concealment, misrepresentation, fraud or mistake concerning the material facts to the risk should be disclosed. No important material facts and figures must be concealed. The duty of disclosure is absolute and positive.

### (2) Insurable Interest:

Insurable interest is a fundamental principle of insurance. It is necessary for a valid contract of insurance. It means that insurable interest must be a pecuniary interest. The insured must have an insurable interest in the subject matter of insurance. Without insurable interest the contract of insurance is void and unenforceable. A person said to have an insurable interest in the subject matter has to have benefit from its existence and prejudice by its destruction. Thus, insurable interest must be actual and real and not arising out of mere expectation.

The insured should have insurable interest in the subject matter of insurance at the following times:

- (a) in life insurance at the time of taking policy
- (b) in fire insurance both at the time of taking policy as well as at the time of loss and
- (c) in marine insurance at the time of loss and an assured need not have an insurable interest at the time of effecting marine insurance

### (3) Indemnity:

A contract of insurance is a contract of indemnity. All contracts of insurance except life, personal accident and sickness insurance are contracts of indemnity. This means that the assured, in case of loss against which the policy has been insured, shall be paid the actual amount of loss not exceeding the amount of the policy. In case of marine and fire insurances the insurer undertakes to indemnify the insured for loss or damage resulting



from specified perils. In case of loss the insured can recover from the insurer the actual amount of loss, not exceeding the amount of policy. A contract of life insurance is not a contract of indemnity. In the case of the life insurance there is no question of actual loss. Whether the assured suffered any financial loss or not, the insurer must pay the policy amount on the maturity of the policy.

**(4) Causa Proxima:**

Causa proxima is defined as “the active efficient cause that sets in motion a chain of events which brings about a result, without the intervention of any force started and working actively from a new and independent source.” Proximate cause means the most closely and directly connected of the perils insured against with loss. Thus the insurer is liable for loss, if the risk insured against is the proximate or the last cause of loss occurred. If there is one cause of loss identified, it is not required to go further into the cause of causes. If there is a series of causes of damage or loss is identified in such the nearest peril is the one insured against the principle of causa proxima is applied. And also the insurer is bound to be responsible only if the closest cause comes within the meaning of the risk insured. Thus the closest peril is the one insured against risk, the loss of the subject matter would be compensated.

**(5) Mitigation of Loss:**

Mitigation of loss is applied in valid insurance contracts. In the event of some mishap to the insured property, the insured must make necessary effort to safeguard his remaining property and minimise the loss as much as possible. If the insured does make any reasonable efforts to reduce the loss the insurer will be liable for payment of all loss resulting from the period insured against. If the insured is proved to be negligent to preserve the property the insurer may compensate only to the extent of loss suffered had the insured taken due care to safeguard the remaining property.

**(6) Subrogation:**

The term ‘Subrogation’ means the transfer of all the rights and remedies available to the insured in respect of the subject matter to the insurer after indemnity has been effected. It is also referred to as getting into the shoes of the others. It implies substitution of the insurer in place of the insured in respect of the latter’s rights and remedies. For example,

- (a) when loss is caused by the wrongful act of a third party, the insurer can proceed against the third party after paying the insured his loss. This principle holds good only in the case of fire and marine insurance,
- (b) Subrogation also arises in motor insurance as, for example, where an insured motor vehicle is damaged owing to the negligence of a third party against whom the insurers will therefore, claim in an endeavour to recover the cost of repairs paid by them under their policy.



## PART - B

### Major Contents of Part B:

- Rate Making
- Reserves
- Demand for Risk Management (Utility Theory)

### Objectives of Rate Making:

Rate making, or insurance pricing, has several basic objectives. Because insurance rates—primarily property and liability rates—are regulated by the states, certain statutory or regulatory requirements must be satisfied. Also, due to the overall goal of profitability, certain business objectives must be stressed in rate making. Thus, rate-making goals can be classified into two basic categories—regulatory objectives and business objectives.

#### Regulatory Objectives:

The goal of insurance regulation is to protect the public. The states have rating laws that require insurance rates to meet certain standards. In general, rates charged by insurers must be adequate, not excessive, and not unfairly discriminatory.

#### Adequate Rates:

The first regulatory requirement is that rates must be adequate. This means the rates charged by insurers should be high enough to pay all losses and expenses. If rates are inadequate, an insurer may become insolvent and fail. As a result, policy owners, beneficiaries, and third-party claimants may be financially harmed if their claims are not paid. However, rate adequacy is complicated by the fact that the insurer does not know its actual costs when the policy is sold. The premium is paid in advance, but it may not be sufficient to pay all claims and expenses during the policy period. It is only after the period of protection has expired that an insurer can determine its actual costs.

#### Not Excessive:

The second regulatory requirement is that the rates must not be excessive. This means that the rates should not be so high that policy-owners are paying more than the actual value of their protection. Exorbitant prices are not in the public interest.

#### Not Unfairly Discriminatory:

The third regulatory requirement is that the rates must not be unfairly discriminatory. This means that exposures that are similar with respect to losses and expenses should and expenses should not be charged substantially different rates. For example, if two healthy males, age 30, buy the same type and amount of life insurance from the same insurer, they should not be charged two different rates. However if the loss exposures are substantially different, it is not



unfair rate discrimination to charge different rates. Thus, if two males, age 30 and age 65, apply for the same type and amount of life insurance, it is not unfair to charge the older male a higher rate because of the higher probability of death.

### **Business Objectives:**

Insurers are also guided by certain business objectives in designing a rating system. The rating system should also meet the following objectives:

- Simplicity
- Stability
- Responsiveness
- Encouragement of loss control

#### **Simplicity:**

The rating system should be easy to understand so that producers can quote premiums with a minimum amount of time and expense. This is especially important in the personal lines market, where the relatively small premiums do not justify a large amount of time and expense in the preparation of premium quotations. In addition, commercial insurance purchasers should understand how their premiums are determined so that they can take active steps to reduce their insurance costs.

#### **Stability:**

Rates should be stable over short periods so that consumer satisfaction can be maintained. If rates change rapidly, insurance consumers may become irritated and dissatisfied. They may then look to government to control the rates or to enact a government insurance program.

#### **Responsiveness:**

The rates- should also be responsive over time to changing loss exposures and changing economic conditions. To meet the objective of rare adequacy, the rates should increase when loss exposures increase. For example, as a city grows, auto insurance rates should increase to reflect the greater traffic and increased frequency of automobile accidents. Likewise, the rates should reflect changing economic conditions. Thus, if inflation causes liability awards to increase, liability insurance rates should be increased to reflect this trend.

#### **Encouragement of Loss Control:**

The rating system should also encourage loss-control activities that reduce both loss frequency and severity. This point is important because loss control tends to keep insurance affordable. Profits are also stabilised. As you will see later, certain rating systems provide a strong financial incentive to the insured to engage in loss control.

### **Rating:**

Insurance prices are called as premiums. Premiums are based on rates and rates are based on per unit of exposure. The term rate is used synonymous with premium in the insurance



business. It is the price per unit of insurance. Exposure units are quantitative units used in insurance pricing:

Tariff Advisory Committee (TAC) constituted under the Insurance Act 1938 controls and regulates the rates that may be offered by insurers in respect of general insurance business relating to fire, marine (Hull), motor engineering, and workmen compensation. All other products are non-tariff. These rates are also called as statutory standards. In addition to these regulations the pricing of insurance products must have the following general objectives:

- (a) **Adequacy:** The rate must be adequate to generate the premium income the insurer needs to pay its claims and expenses. In addition, the insurers' income must be adequate to assure fair rate of return to the investors of funds and finance continuing growth and expansion.
- (b) **Reasonableness:** The rates must not be so excessive that allows insurance companies to earn abnormal gains. There is no recipe for reasonableness, but what the insurance company can justify to the potential buyers in a free market condition is considered as reasonable.
- (c) **Fairness:** The rates must not be "unfairly discriminatory". The insurance rates must be fair and must discriminate among the buyers fairly. The rates must vary with classifications as principle, they must not create unrest among the group of buyers. In other words, the rates must not be same for hetero-groups and must not be different for homo-groups.
- (d) **Simplicity, Consistency and Flexibility:** The rating system must be simple to understand and inexpensive to use. The rate must not change frequently unless circumstances warrant (responsiveness to changes in the number of expected claims and losses). Also, the pricing mechanism should encourage the reduction of losses.

## Types of Rating

Insurance rating assesses the cost of the insurance product. There are basically three recognised rate-making methods:

1. Judgement rating
2. Class rating
3. Merit rating
  - Schedule rating
  - Experience rating
  - Retrospective rating

### (1) Judgement Rating:

It is used when the risk proposed to be bought is so unusual that little or no statistical information about similar risk is available. Each exposure is individually evaluated, and the rate is determined largely by the underwriter's judgement. Such cases are not unusual to the insurers when the loss exposures are so diverse that a class rate cannot be calculated, or when credible loss statistics are not available. When the judgement rating is used, each



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premium is unique and is based on the opinion of the person making it. It is widely used in ocean marine insurance and in some lines of inland marine insurance.

**(2) Class Rating:**

Class rates are the most common in insurance business. Insured risks are classified on the basis of one or several important features and all that belong to the same class are subject to the same rate per unit of exposure. The rate charged reflects the claims experience for the class as a whole. It is based on the assumption that future losses to insured will be determined largely by the same set of factors. This type of rating is also termed as manual rating because the various classifications and the respective rates are in the form of printing manuals. Class rates in insurance are based on age, gender, healthiness, smoking and drinking habits etc. Class rating is also used for homeowners insurance, automobile insurance, workers compensation and health insurance. Number of rating classes is a dilemma for the rate-maker. The greater the number of classes, the more the factors that can be taken into account and therefore the more similar risks in any given class will be. On the other hand, increasing the number of classes reduces the number of insured in each one. Law of large numbers tells that the greater the number of exposures in each class, the more reliable the prediction of future losses will be. Hence, there are reasons for having so many classes and also for having a few. Increasing the number of classes causes the risks in each class to be more nearly alike, but reducing the number of classes causes the rates to be based on a larger body of data and to be more reliable.

**(3) Merit Rating:**

Merit rating is a modification of the class rating. It modifies the class rate of a particular class insured based on individual loss experience. It is based on the assumption that the loss experience of a particular insured will differ substantially from the loss experience of the other insured. In doing so, it reflects the extent to which a specific risk differs from the others in the same class. The various types of merit-rating plans are schedule rating, experience rating and retrospective rating.

Under schedule rating plan, each exposure is individually rated. In calculation of schedule rates the first step is to examine the risk (the person or object insured) in order to identify the features that are likely to cause losses or to prevent them. Then the risk is compared with the average or standard risk of its type. Finally, deductions are made for its characteristics of risk for which it is used. The various additions to and subtractions from the basic rate are based upon the judgement of the person who develop the overall scheduled rating system and important feature of this system is that it identifies the factors entering into an insured rate.

Experience rating modifies the class rate on the basis of claim experience of particular exposure. The actual losses for a period of two or three years are compared with the average losses in the same risk class. The rate is reduced if the risk has a better record than the average, it is increased if the record is worse than average. Experience rating is used only for large risks viz. large enough to have many losses each year reflecting a trend. Hence, this type of rating is generally limited to larger firms that generate a sufficiently high volume of premiums and more credible experience.



Retrospective rating modifies the insurance cost on the basis of current experience. This is generally done by making a provision in the policy document that final rates will be determined retrospectively. Generally a range indication maximum and minimum is specified and the final premium is determined after the policy expires and depends upon the amount of losses incurred during the year. If the losses are very small the insured will pay the minimum premium otherwise if they are very large the insured will be charged the maximum premium. Retrospective rating increases the insured's incentive to control losses, because the pay-off in premium savings can be substantial. It is generally applied to large liability and workers compensation policies.

### Basic Definitions in Rate Making:

Before proceeding, one should be familiar with some basic terms that are widely used in rate making. A rate is the price per unit of insurance. An exposure unit is the unit of measurement used in insurance pricing. It varies by line of insurance. The pure premium refers to that portion of the rate needed to pay losses and loss-adjustment expenses. Loading refers to the amount that must be added to the pure premium for other expenses, profit, and a margin for contingencies. The gross rate consists of the pure premium and a loading element. Finally, the gross premium paid by the insured consists of the gross rate multiplied by the number of exposure units.

### Rate Making in Property and Liability Insurance:

There are three basic rate-making methods in property and liability insurance – judgment, class, and merit rating. Merit rating in turn can be broken down into schedule rating, experience rating, and retrospective rating. Thus, the basic rating methods can be conveniently classified as follows:

- Judgment rating
- Class rating
- Merit rating
- Schedule rating
- Experience rating
- Retrospective rating

#### Judgment Rating:

Judgment rating means that each exposure is individually evaluated, and the rate is determined largely by the underwriter's judgment. This method is used when the loss exposures are so diverse that a class rate cannot be calculated, or when credible loss statistics are not available.

Judgment rating is widely used in ocean marine insurance and in some lines of inland marine insurance. Because the various ocean-going vessels, ports of destination, cargoes carried, and dangerous waters are so diverse, ocean marine rates are determined largely by judgment.



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### **Class Rating:**

The second type of rating method is class rating. Most rates used today are class rates. Class rating means that exposures with similar characteristics are placed in the same underwriting class, and each is charged the same rate. The rate charged reflects the average loss experience for the class as a whole. Class rating is based on the assumption that future losses to insure will be determined largely by the same set of factors. For example, major classification factors in life insurance include age, gender, health, and whether the applicant smokes or is a non-smoker. Accordingly, healthy persons who are the same age and gender and who do not smoke are placed in the same underwriting class and charged the same rate for life insurance. Smokers are placed in a different underwriting class and charged higher rates.

The major advantage of class rating is that it is simple to apply. Also, premium quotations can be quickly obtained. As such, it is ideal for the personal lines market.

Class rating is also called manual rating, because the various rates are published in a rating manual. Class rating is widely used in homeowners insurance, private passenger auto insurance, workers compensation, and life and health insurance.

There are two basic methods for determining class rates: the pure premium method and loss ratio methods:

#### **Pure premium method:**

As stated earlier, the pure premium is that portion of the gross rate needed to pay losses and loss-adjustment expenses. The pure premium can be determined by dividing the dollar amount of incurred losses and loss-adjustment expenses by the number of exposure units. Incurred losses include all losses paid during the accounting period, plus amounts held as reserves for the future payment of losses that have already occurred during the same period. Thus, incurred losses include all losses that occur during the accounting period whether or not they have been paid by the end of the period. Loss-adjustment expenses are the expenses incurred by the company in adjusting losses during the same accounting period.

The final step is to add a loading for expenses, underwriting profit, and a margin for contingencies. The expense loading is usually expressed as a percentage of the gross rate and is called the expenses ratio. The final gross rate can be determined by dividing the pure premium by 1 minus the expense ratio

#### **Loss ratio method:**

Under the loss ratio method, the actual loss ratio is compared with the expected loss ratio, and the rate is adjusted accordingly. The actual loss ratio is the ratio of incurred losses and loss-adjustment expenses to earned premiums. The expected loss ratio is the percentage of the premiums that is expected to be used to pay losses.

### **Merit Rating:**

The third principal type of rating method in property liability insurance is merit rating. Merit rating is a rating plan by which class rates (manual rates) are adjusted upward or downward based on individual loss experience. Merit rating is based on the assumption that the loss experience of a particular insured will differ substantially from the loss experience of other



insured's. Thus, class rates are modified upward or downward depending on individual loss experience.

There are several different types of merit rating plans:

- Schedule rating
- Experience rating
- Retrospective rating

#### **Schedule rating:**

Under a schedule rating plan, each exposure is individually rated. A basis rate is determined for each exposure, which is then modified by debits or credits for undesirable or desirable physical features. Schedule rating is based on the assumption that certain physical characteristics of the insured's operations will influence the insured's future loss experience. Thus, the physical characteristics of the exposure to be insured are extremely important in schedule rating.

Schedule rating is used in commercial property insurance for large, complex buildings, such as an industrial plant. Each building is individually rated based on the following factors:

- Construction
- Occupancy
- Protection
- Exposure
- Maintenance

Construction refers to the physical characteristics of the building. A building may be constructed with frame, brick, fire-resistive, or fire-proof materials. A frame building is charged a higher rate than a brick or fire-resistive building. Also, tall buildings and buildings with large open areas may receive debits because of the greater difficulty of extinguishing or containing a fire.

Occupancy refers to use of the building. The probability of a fire is greatly influenced by its use. For example, open flames and sparks from torches and welding equipment can quickly cause a fire. Also, if highly combustible materials or chemicals are stored in the building, the fire will be more difficult to contain.

Protection refers to the quality of the city's water supply and fire department. It also includes protective devices installed in the insured building. Rate credits are given for a fire alarm system, security guard, automatic sprinkler system, fire extinguishers, and similar protective devices.

Exposure refers to the possibility that the insured building will be damaged or destroyed from a fire that starts in an adjacent building and spreads to the insured building. The greater the exposure from surrounding buildings, the greater are the charges applied.

Finally, maintenance refers to the housekeeping and overall maintenance of the building. Debits are applied for poor housekeeping and maintenance. Thus, debits may be given if oily rags or other debris are scattered about.



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### **Experience Rating:**

Experience rating is another form of merit rating. Under experience rating, the class or manual rate is adjusted upward or downward based on past loss experience. The most distinctive characteristic of experience rating is that the insured's past loss experience is used to determine the premium for the next policy period. The loss experience over the past three years is typically used to determine the premium for the next policy year. If the insured's loss experience is better than the average for the class as a whole, the class rate is reduced. If the loss experience is worse than the class average, the rate is increased. In determining the magnitude of the rate change, the actual loss experience is modified by a credibility factor based on the volume of experience.

Experience rating provides a financial incentive to reduce losses, because premiums can be reduced by favorable loss experience. Experience rating is generally limited only to larger firms that generate a sufficiently high volume of premiums and more credible experience. Smaller firms are normally ineligible for experience rating. This rating system is frequently used in general liability insurance, workers compensation, commercial auto liability insurance, and group health insurance.

### **Retrospective Rating:**

The final form of merit rating is retrospective rating. Under a retrospective rating plan, the insured's loss experience during the current policy period determines the actual premium paid for that period. Under this rating plan, a provisional premium is paid at the beginning of the policy period. At the end of the period, a final premium is calculated based on actual losses that occur during the policy period. There is a minimum premium and maximum premium that must be paid. In practice, the actual premium paid generally will fall somewhere between the minimum and maximum premium, depending on the insured's loss experience during the current policy period.

Retrospective rating is widely used by large firms in workers compensation insurance, general liability insurance, auto liability and physical damage insurance, and burglary and glass insurance.

## **Rate Making In Life Insurance:**

Our discussion of rate making so far has applied largely to property and liability insurance. This section briefly examines the fundamentals of insurance rate making.

### **Net Single Premium:**

Life insurance policies can be purchased with a single premium, or with annual, semi annual, quarterly, or monthly premiums. Although most policies are not purchased with a single premium, the net single premium forms the foundation for the calculation of all life insurance premiums.

The net single premium (NSP) can be defined as the present value of the future death benefit. It is that amount, which together with compound interest, will be sufficient to pay all death claims. In calculating the NSP, only mortality and investment income are considered. Insurance



company expenses or the loading element are considered later, when the gross premium is calculated.

The NSP is based on three basic assumptions:

- (1) Premiums are paid at the beginning of the policy year,
- (2) Death claims are paid at the end of the policy year, and
- (3) The death rate is uniform throughout the year.

Certain assumptions must also be made concerning the probability of death at each attained age.

### **Term Insurance:**

The NSP for term insurance can be calculated easily. The period of protection is only for a specified period or to a stated age. The face amount is paid if the insured dies within the specified period, but nothing is paid if the insured die after the period of protection expires of protection expires.

The insurer must have on hand from each policy owner at the end of the year to pay claims. However, because premiums are paid in advance, and death claims are paid at the end of the year, the amount needed can be discounted for me.

### **Ordinary Life Insurance:**

In calculating the NSP for an ordinary life policy, the same method described earlier for the five-year term policy is used except that the calculations are carried out to the end of the mortality table (age 99).

### **Net Annual Level Premium:**

Most life insurance policies are not purchased with a single premium because of the large amount of money required. Consumers generally find it more convenient to pay for their insurance in installment payments. If premiums are paid annually, the net single premium must be converted into a net annual level premium, which must be the mathematical equivalent of the net single premium. The net annual level premium cannot be determined by simply dividing the net single premium by the number of years over which the premiums are to be paid. Such a division would produce an insufficient premium, for two reasons. First, the net single premium is based on the assumption that the entire premium is paid in advance at the beginning of the period. If premiums are paid in installments, and some insured's die early the insurer would suffer the loss of future premiums. Second, installment payments result in the loss of interest income because of the smaller amounts that are invested. Thus, the mathematical adjustment for the loss of premiums and interest is accomplished by dividing the net single premium by the present value of an appropriate life annuity due of Re 1.

To be more precise, the net annual level premium (NALP) is determined by dividing the net single premium by the present value of a life annuity due (PVLAD) of Re 1 for the premium-paying period.

The concept of a life annuity due requires a brief explanation. The annual premium payments



can be viewed similar to a life annuity, except that the payments flow from the insured to the insurer. Both life annuity payments and premium payments are similar in that both are paid during the lifetime of a specified individual, or for a stated period of time. Both cease on death (unless the annuity has a refund feature), and both are discounted for compound interest. The major exception is that the first premium is due immediately (because premiums are paid in advance), while the first annuity payment is due one payment interval from the date of purchase. Thus, the annual payments are the equivalent of a regular life annuity plus one payment that is made immediately. However, to distinguish the premium payments from the annuity payments, we refer to the series of premium payments as a life annuity due. If the annual level premiums are to be paid for life – such as in an ordinary life policy – the premium is called a whole life annuity due. If the annual premiums are to be paid for only a temporary period – such as in the case of term insurance or limited payments policies – the premium is called a temporary life annuity due.

### **Gross Premium:**

The gross premium is determined by adding a loading allowance to the net annual level premium. The loading must cover all operating expenses, provide a margin for contingencies, and, in the case of stock life insurers, provide for a contribution to profits. If the policy is a participating policy, the loading must also reflect a margin for dividends. Three major types of expenses are reflected in the loading allowance:

- (1) Production expenses,
- (2) Distribution expenses, and
- (3) Maintenance expenses.

Production expenses are the expenses incurred before the agent delivers the policy, such as policy printing costs, underwriting expenses, and the cost of the medical examination. Distribution expenses are largely selling expenses, such as the first-year commission, advertising, and agency allowances. Maintenance expenses are the expenses incurred after the policy is issued, such as renewal commissions, costs of collecting renewal premiums, and state premium taxes.

### **Definition of the Reserve:**

The policy reserve can be defined as the difference between the present value of future benefits and the present value of future net premiums. The net single premium is equal to the present value of future benefits. At the inception of the policy, the net single premium is also equal to the present value of future net premiums. The net single premium can be converted into a series of annual installment payments without changing this relationship. However, once the first installment premium payment is made, this statement is no longer true. The present value of future benefits and the present value of future net premiums are no longer equal to each other. The present value of future benefits will increase over time, because the date of death is drawing closer, while the present value of future net premiums will decline, because fewer premiums will be paid. Thus, the difference between the two is the policy reserve.

At the inception of the policy, the net single premium is equal to the present value of future benefits and the present value of future net premiums.



The present value of future benefits increases over time, while the present value of future net premiums declines, and the reserve is the difference between them. At age 100, the reserve the reserve is equal to the policy face amount. If the insured is still alive at that time, the face amount of insurance is paid to the policy owner.

### **Purposes of the Reserve:**

The policy reserve has two fundamental purposes. First, it is a formal recognition of the insurer's obligation to pay future benefits. The policy reserve plus future premiums and interest earnings must be sufficient to pay all future policy benefits.

Second, the reserve is a legal test of the insurer's solvency. The insurer must hold assets equal to its legal reserves and other liabilities. This requirement is the legal test of the insurer's ability to meet its present and future obligations to its policy owners. Policy reserves should not, therefore, be viewed as a fund. Rather, they are a liability item that must be offset by assets.

### **Types of Reserves:**

The reserve can be viewed either retrospectively or prospectively. If we refer to the past experience, the reserve is known as a retrospective reserve. The retrospective reserve represents the net premiums collected by the insurer for a particular block of policies, plus interest earnings at an assumed rate, less the amounts paid out as death claims. Thus, the retrospective reserve is the excess of the net premiums accumulated at interest over the death claims paid out.

The reserve can also be viewed prospectively when we look to the future. The prospective reserve is the difference between the present value of future benefits and the present value of future net premiums. The retrospective and prospective methods are the mathematical equivalent of each other. Both methods will produce the same level of reserves at the end of any given year if the same set of actuarial assumptions is used.

Reserves can also be classified based on the time of valuation. At the time the reserves are valued, they can be classified as terminal, initial and mean.

### **Reserves in Property and Liability Insurance:**

The remainder focuses largely on the various financial reserves of insurance companies. Insurers are required by law to maintain certain reserves on their balance sheets. Because premiums are paid in advance, but the period of protection extends into the future, insurers must establish certain reserves to assure that the premiums collected in advance will be available to pay future losses.

Property and liability insurers are required to maintain two principal types of financial reserves:

- Unearned premium reserve
- Loss reserves

### **Unearned Premium Reserve:**

The unearned premium reserve is a liability item that represents the unearned portion of gross premiums on all outstanding policies at the time of valuation. An insurer is required by law



to place the entire gross premium in the unearned premium reserve when the policy is first written, and renewal premiums must be placed in the same reserve.

### **Reasons for the Unearned Premium Reserve:**

The fundamental purpose of the unearned premium reserve is to pay for losses that occur during the policy period. Premiums are paid in advance, but the period of protection extends into the future. To assure policy owners that future losses will be paid, the unearned premium reserve is required.

The unearned premium reserve is also needed so that premium refunds can be paid to the policy owners in the event of cancellation. If the insurer cancels the policy, a full pro rata premium refund based on the unexpired portion of the policy term must be paid to the policy owner. Thus, the unearned premium reserve must be adequate so the premium refunds can be made in the event of cancellation.

Finally, if the business is reinsured, the unearned premium reserve serves as the basis for determining the amount that must be paid to the reinsurer for carrying the reinsured policies to the end of their terms. In practice, however, the amount paid to the reinsurer may be considerably less than the unearned premium reserve, because the reinsurer does not incur heavy first-year acquisition expenses in acquiring the reinsured policies.

### **Methods of Calculation:**

Several methods can be used to calculate the unearned premium reserve. Only one of them is described here. Under the annual pro rata method, it is assumed that the policies are written uniformly throughout the year. For purposes of determining the unearned premium reserve, it is assumed that all policies are issued on July 1, which is the average issue date. Therefore, on December 31, the unearned premium reserve for all one-year policies is one-half of the premium income attributable to these policies. For two-year policies, the unearned premium reserve is three-fourths of the premium income, and for three-year policies, it is five-sixths of the premium income.

### **Equity in Unearned Premium Reserve:**

The law requires an insurer to place the entire gross premium in the unearned premium reserve. As will be shown later, this results in a redundant or excessive reserve, because most of the expenses incurred in writing the business are incurred when the policy is first written. Relatively lower expenses are incurred after the policy is issued. However, because of its emphasis on insurer solvency, the law prohibits an insurer from taking credit in advance for these prepaid expenses. Although the premium is being earned gradually over the policy period, the initial acquisition and underwriting expenses cannot be amortised over the same period. Instead, they are treated as cash expenses and charged off immediately. Therefore, because the unearned premium reserve must be established on the basis of a gross premium rather than a net premium, it is substantially overstated. This overstatement or redundancy in the unearned premium reserve is called the equity in the unearned premium reserve. Authorities estimate that the unearned premium reserve may be overstated by 20 to 40 percent, with 35 percent being a typical or average estimate of the equity in this reserve.



### Effect on Underwriting Profit or Loss:

The equity in the unearned premium reserve is important in determining the true underwriting profit or loss of a property-casualty insurer. For example, assume that a new property insurer begins operating on January 1. It plans to sell only one-year property insurance policies. In establishing the rates, the insurer has an expected loss ratio of 60 percent, an expected expense ratio of 35 percent, and expects to earn an underwriting profit of 5 percent. The loss ratio is the ratio of incurred losses and loss-adjustment expenses to earned premiums. The expense ratio is the ratio of expenses incurred to written premiums. Also assume that the business is written uniformly throughout the year, and the annual pro rata method is used to determine the unearned premium reserve.

### Loss Reserves:

The loss reserve is another important liability reserve for property-liability insurers. A loss reserve is the estimated cost of settling claims that have already occurred but have not been paid as of the valuation date. More specifically, the loss reserve is an estimated amount for (1) claims reported and adjusted but not yet paid, (2) claims reported and filed but not yet adjusted, and (3) claims incurred but not yet reported to the company. The loss reserve is especially important to casualty insurers because bodily injury and property damage liability lawsuits may take a long time to settle—often several years. In contrast, property insurance claims, auto collision and comprehensive losses, and other first-party insurance claims are settled more quickly; hence loss reserves are relatively small for property insurers. Loss reserves generally can be classified as case reserves, reserves based on the loss ratio method, and incurred-but-not-reported reserves.

### Case Reserves:

Case reserves are loss reserves that are established for each individual claim when it is reported. Major types of case reserves include the following:

- Judgment method
- Average value method
- Tabular method

Under the judgement method, a claim reserve is established for each individual claim. The amount of the loss reserve can be based on the judgement of someone in the claims department, or it can be estimated by a computer program. Many insurers now use computer programs that apply certain rules to calculate the size of the loss reserve. The details of an individual claim are entered into the computer, and the computer program estimates the size of the required loss reserve.

Under the average value method, an average value is assigned to each claim. This method is used when the number of claims is large, the average claim amount is relatively small, and the claims are quickly settled. For example, loss reserves for auto physical damage claims are often based on this.



Under the tabular value method, loss reserves are determined for certain claims for which the amounts paid depend on the length of life, duration of disability, remarriage of the beneficiary, and similar factors. This method is often used to establish loss reserves involving total permanent disability partial permanent disability, survivor benefits, and similar claims. The loss reserve is called a tabular reserve because the duration of the benefit period is based on data derived from mortality, morbidity and remarriage tables.

### **Loss Ratio Method:**

Case reserves just discussed establishes loss reserves for individual claims. In contrast, the loss ratio method establishes aggregate loss reserves for a specific line of insurance, such as workers compensation. Under the loss ratio method, a formula based on the expected loss ratio is used to estimate the loss reserve. The expected loss ratio is multiplied by premiums earned during some time period. Loss and loss-adjustment expenses paid to date are then subtracted from the ultimate loss figure to determine the current loss reserve. The loss ratio method is required by law for certain lines of insurance, such as workers compensation, where the expected loss ratio ranges from 65 percent to 75 per-cent of earned premiums.

### **Incurred-But-Not-Reported (IBNR) Reserve:**

Many losses occur near the end of the accounting period but are not reported until the next period. The incurred-not-reported (IBNR) reserve is a reserve that must be established for claims that have already occurred but have not yet been reported. For example, on December 31, a certain number of auto accidents have already occurred but have not been reported to the insurer. Loss reserves must be established for these losses that will be reported during the next accounting period.

### **Life Insurance Policy Reserves:**

Policy reserves are the major liability item of life insurers. This section briefly examines the nature, purposes, and types of life insurance policy reserves.

#### **Nature of the Reserve:**

Under a level-premium plan of life insurance, the premiums paid during the early years of the contract are higher than are necessary to pay death claims, while those paid during the later years are insufficient to pay death claims. The excess premiums collected during the early years of the contract must be accounted for and held for future payment to the policyowners' beneficiary. The excess premiums paid during the early years result in the creation of a policy reserve. Policy reserves are a liability item on the company's balance sheet that must be offset by assets equal to that amount. Policy reserves are considered a liability item because they represent an obligation of the insurer to pay future policy benefits to policyowners. The policy reserves held by the insurer plus future premiums and future interest earnings will enable the insurer to pay all future policy benefits if the actual experience conforms to the actuarial assumptions used in calculating the reserve. Policy reserves are often called legal reserves, because state insurance laws specify the minimum basis for calculating them.



## Pricing of Insurance Products:

Insurance pricing is concerned with the determination of premium to be charged for each contract undertaken by the insurer. The fundamental principle of insurance is that the premium charged by the insurer should be sufficient to fund:

- (1) the expected claim costs,
- (2) administrative costs and
- (3) provide an expected profit to compensate for the cost of obtaining the capital.

The premium level that is just sufficient; to meet these criteria is known as the fair premium. The fair premium is also influenced by the investment income earned by the insurer on funds provided by premiums before claims are paid out. Therefore, the four major determinants of fair premium are:

- Expected Claim Costs
- Administrative Costs
- Investment Income, and
- Fair Profit Loading

### Expected Claim Costs:

The premium charged on each insurance contract should be able to cover all of its claim costs. Therefore, the fundamental determinant of insurance premiums is, the expected claim cost. If the insurer charged less than expected claim cost, average claim costs would exceed average revenues.

In a competitive market, differences in expected claim costs across consumers will produce differences in premiums across consumers as long as two conditions hold:

- (a) Insurers can identify differences in expected claim costs across consumers at a sufficiently low cost.
- (b) Insurance buyers generally look for policies with low premiums for a given amount and quality of coverage.

In practice, insurers incur costs for gathering and processing information in order to estimate differences in expected claim costs across buyers. These information costs and intrinsic uncertainty about the expected claim cost for different buyers make it infeasible in practice to have each buyer pay a premium based on the buyer's true but unknown expected claim cost. Instead, insurer's estimate buyers' expected claim costs using all of the information that can help predict differences in expected claim costs as long as the information can be obtained at reasonable cost. The process by which insurers estimate the expected claim cost for different buyers and charge premiums that vary according to expected claim costs is known as risk classification (or categorisation).

Note that in the classification context, a "high risk" policyholder has high expected claim costs.

**Risk Classification:** Risk categorisation is a common feature of competitive insurance markets.



Categorisation involves grouping together consumers with similar characteristics and charging them a premium or rate that differs from consumers with different characteristics. Consumers are broadly categorised as homogeneous buyers and heterogeneous buyers.

To consider next the effects of classification costs; that is, the money spent by insurers on the collection and evaluation of information to classify applicants based on estimates of their expected claim costs. These costs obviously reduce the economic advantages of classification. In some cases, classification costs might cause classification to increase the total cost of risk because classification costs are greater than any savings due to changes in behaviour.

When considering the possibility that classification might increase the total cost of risk, it is essential to consider at least two other issues. First, disincentives for insurers to spend money on classification sometimes might lead to too little classification. For example, if competing insurers can quickly discover and copy new methods that better predict claim costs and lead to significant reductions in the cost of risk, insurers will have less incentive to develop these methods. This is one major advantage of insurers making underwriting decisions using information that is not disclosed to competitors. Second, any attempt to prevent classification by regulating insurance company classification processes will involve some cost. Regulation also will be less than completely effective, and it could have unexpected and unintended effects.

### **Administrative Costs:**

Insurers incur significant administrative costs for pricing and distributing policies. These costs are commonly called underwriting expenses. The three major components of administrative costs are:

- Commissions to agents,
- General expenses (including expenditure for pricing, marketing and issuing policies) and
- Costs associated with claims processing

The administrative costs as proportion of premiums differ from one type of insurance to another. For example, the administrative costs as proportion of premiums may be least for personal auto physical damage, whereas it may be highest for liability insurance because of defence costs (e.g., attorney fees) involved in negotiating settlement or taking a case to court.

The total expense loading for underwriting and loss adjustment expenses ranges from about 30 percent for personal auto physical damage insurance to about 50 percent for other liability coverage. It should be kept in perspective that some of these expenses are incurred to provide valuable ancillary services to insurance buyers (e.g., defence costs for liability coverage, much of the cost of settling workers' compensation claims, and general expenses that is incurred to provide business insurance buyers with advice on loss control).

Many types of insurance require significantly higher underwriting expenses when an insurer first sells coverage to a particular buyer than when the coverage is renewed. In these cases, only part of the first year's expense usually will be recovered in the first year's premium. The remainder of the expense is expected to be recovered over the duration of the relationship with the policyholder. Other factors held constant, this implies that fair premium rates will be lower the longer the buyer is expected to renew coverage, because the insurer then needs



a lower periodic charge to recover its initial expenditure. The amount of renewal premiums that is available to recover first-year expenses constitutes a significant source of franchise value for many insurers and thus provides additional incentive for these insurers to hold capital to reduce the probability of insolvency.

**Investment Income:** In the simplest insurance contracts, the full premium is paid in a lump sum when the policy is issued, whereas claim payments are made over time. In some contracts, such as business liability insurance, a significant proportion of total claim costs are paid over a period of years after the coverage period has ended. Payments occur slowly over time as the insurer negotiates and settles known claims against its policyholders. The lag between the time that coverage is sold and claims are paid is known as the claims tail liability and workers' compensation insurance are "long-tailed" lines; that is, a large proportion of claims are paid a number of years after the coverage period. Property insurance coverage and coverage for employee medical costs under group health insurance contracts are examples of "short-tailed" lines; that is, most claims are paid during the year of coverage or the year after.

The fair premium should reflect the interest earned until claims are paid. As interest rates rise, the amount of premium that needs to be charged to fund claim payments declines because the insurer can earn more interest. Similarly, as the claims tail gets longer (i.e., as a given total value of claims is paid over a longer period of time), the amount of money that the insurer needs to fund claims payments declines because more investment income will be earned before claims are paid. Thus, a fundamental principle of insurance pricing is that fair premiums reflect the ability of the insurer to earn interest on premium before it has to pay claims. In other words, the fair premium reflects the time value of money. The fair premium is negatively related to both the level of interest rates and the length of the claims tail.

### Profit Loading:

Profit loading is essential for three reasons:

1. As insurance business involves investment in infrastructure facilities including buildings, furniture, computers, key personnel, etc. and the capital tied up in this investment must earn a reasonable return.
2. As claim costs are uncertain, fixed premium insurance contracts make it necessary for the insurer to hold capital - that is to hold assets in excess of expected claim costs - in order to increase the likelihood that it can pay all claims. In order to obtain capital, an insurer must offer investors an expected after-tax return equal to what they could earn elsewhere on an investment of similar risk.
3. As the investment income earned on the financial capital held by the insurer is subject to double taxation, to offset this disadvantage, an insurer must find an additional source of income for capital provided. If the insurer invests in tax-exempt bonds to reduce this cost, there is still a cost due to lower returns on these bonds.

The additional income is obtained by charging premiums in excess of the discounted value of expected claim costs and administrative costs. Stated differently, policyholders must compensate investors for the disadvantages of investing in an insurance company. The extra amount that policyholders must pay to compensate investors for providing capital is called



the fair profit loading. Since the underlying reason that profit loading exists is uncertainty in claim costs, such profit loading is sometimes also called risk loading. The greater the risk that claim costs could be substantially higher than expected, the more capital an insurer needs to achieve a given probability of solvency. As a result, when claim costs are more variable (less predictable), greater amounts of capital will be required and thus a higher profit loading will be needed by insurers.

### **Actuaries:**

The individual insurers or professional rate making organisations may determine insurance rates. However, actuaries are generally involved, in the rate-making process. Actuaries are specialists in the mathematics of insurance, who carry out the prime responsibility of the rate-making process either working in companies or otherwise. They make financial sense of the future by applying mathematical models to problems of insurance and finance.

Actuaries are experts who perform actuarial analysis of insurance rates, rating procedures, rating plans, and schedules of insurance companies. These are professionals who are experienced in reviewing and analysing insurance operations, reserves and underwriting procedures and provide technical assistance regarding actuarial matters to policy examiners and other technical staff. They perform the following functions:

- (a) Developing new forms of insurance to meet the changing needs of consumers.
- (b) Determining the reserves needed to meet the future obligations.
- (c) Analysing the expenses and earnings and providing database for distribution of surpluses.
- (d) Conducting research studies on claims experiences, projecting future claims and earnings.
- (e) Communicating with the company officials, agents, policyholders, and regulatory authorities about company policies and practices.

### **Demand for Risk Management (Utility Theory):**

The destruction caused by any unforeseen event is referred to as "Risk". In the insurance business, people exposed to the same risk form a group and share the loss together. Insurance companies collect the shares (Premiums) in advance from the group and create a fund.

This fund is utilised to pay for the loss (Claims) that is incurred by any member of the group.

Risks can be classified into various types:

- (a) Financial and non-financial risks
- (b) Dynamic risks
- (c) Speculative risks



Risk cannot be avoided through insurance, but may be considered as a means to transfer the risk. It is also a mechanism to compensate the financial and economic loss due to risk. Safety measures and damage control management can be adopted to mitigate or eliminate the magnitude of risk. The fundamental principle of insurance is to share the losses and to substitute uncertainty with certainty. Expected utility theory emphasises that the demand for insurance is a demand for certainty.

The conventional specification of the theory perceives that the buyers of insurance prefer certain losses to actuarially equivalent uncertain losses. But certain other surveys indicate that individuals actually prefer uncertain losses to actuarially equivalent certain losses.

This can be explained by saying that “the purpose of any insurance policy is to convert an uncertain, but potentially large loss into a certain small loss. Such a conversion benefits the consumer, if greater losses cause progressively larger declines in utility (i.e., if there is diminishing marginal utility of wealth)” – New house, 1978, page.19. For example, insurance against fire peril where the bigger part of the loss will be insured that is uncertain for a specific premium today.

Another approach evaluates a conventional expected utility theory explaining the demand for insurance by an individuals demand for an uncertain payoff of income in a pre specified state. This can be explained through the demand for health insurance. According to this theory, becoming ill fundamentally changes preferences. Thus an insured customer is able to transfer income into the ill state where the marginal utility of income is greater.



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## PART - C

### Major Contents of Part C:

- Public Liability (Industrial) Insurance
- Professional Indemnity Insurance

Liability exposures can be defined as those losses, which are caused due to the failure to accomplish legally imposed obligations rather than enjoy the rights. The limit of liability of the Insurers under a policy is the sum insured. If there is a dispute in the settlement of a claim made by the insured, the matter can be taken to the court of law seeking a fair settlement.

### **Public Liability (Industrial) Insurance:**

Growing awareness of insurance and rights of people along with the growing businesses be it a hotel, manufacturing plant, dwellings, IT parks, etc, business/individuals are exposed to a large liability arising out of bodily injury/ property damage suffered by third party.

#### **Coverage:**

FGI covers the insured against legal liability towards claims to third party in respect of accidental death / bodily injury and / or property damage arising out of the specified business of the insured and the legal cost/expenses incurred in connection with the claim.

#### **Sum insured:**

Depending on exposure, the insured has to fix two limits of indemnity - Any One Accident (AOA) and Any One Year (AOY). The ratio between AOA and AOY can be of 1:1, 1:2, 1:3 and 1:4.

#### **Premium:**

Premium depends on risk group, indemnity limits, ratio of limits, number of locations, annual turnover, etc.

#### **Exclusions:**

- Liability to own employees or contractor employees
- Losses arising out of deliberate, willful or intentional non-compliance of any statutory provisions
- Losses arising out of loss of pure financial nature - such as loss of goodwill, loss of market, etc.
- Losses in connection with any product
- Pollution
- Consequential loss



- Losses arising out of transportation of material
- Extension
- The policy may be extended to cover Act of God perils, Transportation of hazardous substances, etc.

## **Professional Indemnity Insurance / Errors & Omissions Insurance**

### **Scope of Cover:**

This policy will indemnify the insured against claims for compensation arising out of a breach of professional duty by way of the negligent act, error or omission of the Insured during the course of his profession. In addition, the policy pays the defence cost, subject to maximum the sum insured. Only those claims which are made against the insured during the policy period are admissible under the policy.

### **Exclusions:**

- Matters specific to your business like Investment, breach of Taxation etc.
- Collateral warranties
- Matter Insurable elsewhere
- Deliberate, reckless or dishonest acts
- Pre existing Problems
- War, Pollution and Terrorism
- Asbestos
- Claims Brought by a Related party
- Third Party Liability
- Product Liability
- Consequential Loss (Loss of profit / Trading Loss)
- Non Compensatory payments like Punitive Damages / Fines and Penalties
- Any fees claimed back by a customer of the Assured due to or allegedly due to total non-performance of the Assured's contractual obligations to that customer unless such fees form part of a compromise settlement involving a claim for damages.

**Premium:** Premium depends upon the profession and risk exposure as assessed by the insurer. Also it depends upon the indemnity limits opted.

### **Others:**

- Product Liability Insurance
- Directors and Officers Liability Insurance



- Commercial General Liability Insurance
- Workmen's Compensation Insurance
- Commercial General Liability Insurance
- Who is indemnified

### **Insured Company:**

At the request of the Insured, any party who enters into an agreement with the Insured for any purpose of the Business. Officials of the Insured in their business capacity or private capacity.

Any person who at any time is has been or may become during the period of this Certificate a partner or director.

Any person who is or has been employed under a contract of service including Self Employed Persons.

The estates and/or the legal representatives in the event of the death or incapacity of the Assured or of any of the persons defined in (i) and (ii) above.

**Coverage:** Bodily injury and property damage liability from a Third Party. Damages because of bodily injury include damages claimed by any person or organisation for care, loss of services, or death resulting at any time from the bodily injury.

**Personal and advertising injury liability:** Slander or damage to reputation falls under personal injury. Advertising injury protects companies from charges of negligence that result from the promotion of its own goods or services.

Personal and advertising injury means injury, including consequential bodily injury, arising out of false arrest, detention or imprisonment, malicious prosecution etc.

**Medical Payments:** Medical expenses bodily injury caused by an accident (First Aid administered at the time of an accident; necessary medical, surgical, x-ray and dental services, including prosthetic devices; and necessary ambulance, hospital, professional nursing and funeral services.)

**Products-completed operations hazard:** Includes all bodily injury and property damage occurring away from premises you own or rent and arising out of your product or your work except, Products that are still in your physical possession, work that has not yet been completed or abandoned.

### **Scope of Cover:**

- Legal costs in defending allegations or suits brought against the insured entity / Employees.
- Any awards granted to the claimants, including out of court settlements.
- Legal costs / awards arising out of the activities of Specialist Consultants, Sub-Contractors or any other person(s) or entity acting on the Assured's behalf and for whom the Assured are responsible. Provided always that underwriters shall become subrogated to all rights of recourse of the Assured.

**Key Policy Features:**

- The policy can be obtained on either “Claims Made Basis” or occurrence based with each having its advantages and disadvantages.
- Where a policy is written on a “claims-made” basis, this means that the policy in force at the time a claim against you is made will pay for losses, regardless of when they occurred in the past. (Assuming no retroactive inception date restriction).
- With an “occurrence” based policy, even though the policy may have expired, provided the policy was in force at the time that the bodily injury or property damage occurred, a claim can still be made against it.

**Exclusions:**

Each Section of Cover has its own exclusions. However broad exclusions are:

- Professional Indemnity Exclusion
- Care, Custody and Control Exclusion
- Advertising Legal Liability Exclusion
- Expected or Intended Injury
- Liquor Liability
- Workers’ Compensation and Similar laws
- Pollution
- Aircraft, Auto or Watercraft excluding non owned
- War and Terrorism
- Recall of Products, Work or Impaired Property
- Employment-Related Practices
- Asbestos



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## PART - D

### Major Contents of Part D:

- Auto/Motor Insurance

### **Auto/Motor Insurance:**

#### **Motor Insurance:**

#### **Objectives:**

This lesson is helpful to

- Understand the types of cover
- Understand various techniques of underwriting factors
- Understand general tariff regulations

#### **Structure:**

1. Introduction to Motor Insurance
2. Meaning of class of vehicles
3. Importance of types of cover
4. Features of General Tariff Regulations
5. Review Questions

### **Introduction to Motor Insurance:**

Every motorist runs the risk of incurring legal liability to pay compensation to third parties for death, bodily injury or damage to property, arising out of the use of the vehicle. The motorist may further suffer heavy loss because of accidental damage to the vehicle itself. The motor insurance policy provides cover to the motorist not only against legal liabilities to third parties but also against accidental damage to the vehicle.

The Motor vehicles Act, 1939 has made it compulsory for motorists to take insurance to cover liability to third parties, subject to certain limits. This is piece of social legislation by which third parties are able to enforce claims for financial compensation, for wrong doing by the motorists. This minimum cover is invariably incorporated in all motor policies.

### **Motor Vehicles Act, 1939:**

Sec. 95 of the M.V. Act provides that every motorist should take insurance against any liability which he may incur. This includes death or bodily injury to any person or damage to any property



of a third party, arising out of the use of vehicle in a public place. Liability to persons carried in the vehicle need not be covered unless such persons are carried for hire or reward. However, the owner's liability under the Workmen's compensation Act for drivers, conductors and ticket-examiners in public service vehicles and persons carried in goods vehicles in connection with the operation, maintenance or loading or such vehicles, should be covered by insurance.

The limits of liability laid down in the M.V. Act for compulsory insurance are as follows:

a) For goods - carrying vehicles	Rs. 1,50,000 in all including all liabilities, if any, arising under the W.C. Act 1932, in respect of death or bodily injury to the employees (other than driver) not exceeding 6 in number, being carried in the vehicle.
b) For vehicles carrying passengers for hire or reward, or by person or, or in pursuance of a contract of employment	The limit is Rs. 15,000/- for each individual passenger. For persons other than passengers, the limits is Rs. 50,000/-
c) For other classes of vehicles	The actual liability incurred
d) Damage to property of third party	Rs. 6,000/- irrespective of the class of vehicle

If a person is killed or permanently disabled by the owner of the motor vehicle, he shall be liable to pay compensation. This is a fixed sum of Rs. 15,000/- towards or owner of the vehicle. The claim for compensation shall not be defeated even if the injured third party is guilty of neglect or default or wrongful act. The quantum of compensation recoverable will not to be reduced on the basis that the claimant shared the responsibility for such death or permanent disablement.

This right to claim compensation under this section shall be in addition to any other right to claim compensation, under any other provisions of the Act. But while fixing the compensation, the compensation under this section will be deducted and only a residual sum will become payable.

The foregoing provisions also apply in relation to any claim for compensation for death or permanent disablement of any person under Workmen's compensation Act, 1923 resulting from an accident arising out of the use of the motor vehicle.

The new chapter in the motor vehicle Act extends the concept of liability of the vehicle owner even if the driver of the vehicle is not at fault. In view of this new chapter, wherever the word 'liability' arises in Chapter VIII, it has to be taken to include the liability under the new chapter as well. For example, liability without fault in certain cases.

The new sections 109-A, 109-B and 109-C provide for certain of a 'SOLATIUM FUND' with contributions from the general insurance corporation of India and its subsidiaries, Central Government and State Governments. These sections provide for payment of a fixed sum of Rs. 5,000/- for death of any person resulting from a hit-and-run motor accident. A fixed sum of Rs. 1,000/- is to be paid to any person grievously hurt in a hit-and-run motor accident. Hit-and-run motor accident means an accident arising out of the use of the motor vehicle.

The payment of compensation in respect of death or grievous hurt to any person section 109A shall be subject the condition that if compensation is awarded in respect of death or injury



under any other provision of the Act, or any other law, the compensation paid under section 109-A out of Solatium Fund, shall be credited back to the fund by way of refund.

### Meaning of Class of Vehicles:

For the purpose of insurance, motor vehicles have been divided into three classes:

1. **Private cars:** This class comprises private cars including station wagons. This should be used for social, domestic and pleasure purpose or business and professional purposes. (excluding the carriage of goods other than samples)
2. **Motor cycles:** Motor cycles with or without side cars, auto-cycles or mechanically assisted pedal cycles and motor scooters with or without side card come under this class.
3. **Commercial vehicles:** All vehicles other than private cars or motor cycles excluding vehicles running on rails come under the class.

### Types of Cover:

There are three types of insurance covers for each of these classes of vehicles

1. **Comprehensive:** It is the widest in scope and covers both accidental damage to the vehicles and third party liability for death / bodily injury and property damage.
2. **Third party only:** This covers third party liability for death / bodily injury and property damage. The extent of cover is the same as that under the third party section of the comprehensive policy.
3. **Act liability only:** The cover is confined to the requirements of the M.V. act.

### Third party policies:

The form used for third party only (liability to the public risks only) policy is the same as that used for the comprehensive policy. However, the following deletions have to be made for each class of vehicle:

Private car: Section I (own damage) deleted

Section II (medical expenses) deleted

Motor cycle/ Scooter: Section I (own damage) deleted

Commercial vehicles: Section I (own damage) deleted "Act" only policies

The form used for "ACT" only policies is different from the form used for comprehensive and third party policies. The act form is common to all classes of vehicles.

### Motor Trade risks:

There is a common misconception among the public and motor repairers that so long as the owner carries a comprehensive policy the vehicle is protected by insurance during repairs and road tests. The legal position is that insurance on the vehicle is suspended during the period the



vehicle is in the hands of the repairer. He is, therefore, expected to take a separate motor trade policy on a trade certificate (plate) or a named driver basis, for accidents outside his workshops and motor trade internal risks policy for accidents inside the workshop.

For motor trade vehicles i.e., new unregistered vehicles in transit by road or registered vehicles for testing or delivery after repairs, a motor trade policy from has to be used. Cover is similar to the one extended under a commercial vehicle policy.

### **Underwriting Factors:**

The proposal form is very essential for motor insurance. Details relating to the make, year of manufacture, registration number, cubic capacity / horse power, ownership, use of the vehicle, type of cover, estimated value for insurance, past claim, bonus, discount entitlement etc. are some of the important factors which must be indicated in the proposal form. In the case of goods and passenger vehicles and the categorisation of the vehicle according to its use should be considered.

Comprehensive cover can be granted on vehicles upto the age indicated below, subject to prior inspection of vehicles by the company's branch officials. Tariff excesses, if any, will apply. Inspection can be waived if the insured has been enjoying a no-claim bonus continuously for three years on comprehensive premium and the insurance is being transferred to us without break.

No inspection is necessary at renewals of existing insurances. But any request for conversion from a third party risk only policy to comprehensive cover should be processed after a thorough inspection of the vehicle. This applies whether the request is made at the time of renewal or during the currency of the policy.

Private cars 10 years

Commercial vehicles including tax are 4 years

Motor cycles / scooters 6 years

Old vehicles can be covered with suitable excesses besides tariff excesses and subject to prior inspection by the company's Branch officials. The excesses can be fixed at a lower rate if the proposer enjoys a no-claim discount.

Quite often imported cars are proposed for comprehensive insurance. The market value of such vehicles is a matter to be decided after ascertaining the prevalent value and the proposer's own estimate. Since such vehicles command a high value, and consequently a high premium for insurance, there may be a tendency on the part of the proposers to under-value them.

Please note that in the event of a total loss, the amount payable under the policy will be the insured value or the market value at the time of the accidents whichever less is. Therefore, the sum insured should reflect the market value as nearly as possible. Over insurance will not afford any benefit. Under insurance on the other hand will be to their disadvantage. The insurers should not indicate or suggest any particular value for insurance purposes. This is because it may be argued later that settlement should be on that basis. The valuation of vehicles should be left to the proposer.



Where the vehicle is provided with extra fittings, all details with the separate value of each item should be obtained along with the proposal and incorporate in the policy schedule. Any item, which is not normally supplied with a new vehicle, should be deemed as an extra fitting. While obtaining such particulars, details of electronic items such as tape recorders, radio, air-conditioners, fans, musical horns and non-electronic items such as neck rest, sun shades, sun visor etc. should be obtained separately.

All proposals should be scrutinised with special reference to previous claims history and any evidence of bad physical hazard should be dealt with by the imposition of an 'excess' or by offering 'ACT/THIRD PARTY COVER' only. In respect of commercial vessels, the insured should be persuaded to take cover for increased indemnities to third parties and passengers, in his own interest.

Proposers of Motor cycle insurance should be advised about the restricted meaning of THEFT under motor cycle policies. They should be asked to protect themselves fully for loss of accessories by payment of additional premium. Similarly efforts should be made to effect insurance for additional risks as provided under the extra benefits so as to obtain full protection.

### **Premium rates:**

The premium and other terms for motor insurance are regulated by the India Motor tariffs prescribed by the tariff advisory committee. Since the tariff advisory committee is a statutory body, the tariffs have statutory sanction and no premium less than that laid down in the tariffs can be charged.

The India motor tariff has been revised with effect from 1<sup>st</sup> February 1982. The country has been divided into two regions-for private rating viz., Zone A for Madras (city and mofussil) and Bombay (mofussil) and Zone-B for the rest of India. The rating for the motor-cycles commercial vehicles and motor trade risks will be on an All India basis.

Separate rates have been indicated for own damage, liability to public risk and act only liability risks. Therefore, it should be ensured that while quoting the premium for comprehensive cover, the own damage premium is added to the liability, to the public risk premium. While issuing comprehensive policies, the premium for own damage risk and liability to the public risk premium should be shown separately in the schedule of the policy.

No-claim bonus will be available only in respect of the own damage portion of the comprehensive policy and own damage portion of third party fire and theft risk policy. Private car tariff.

This tariff applies to all vehicles used for social, domestic and pleasure purposes only. The rating of private car type vehicles, such as station wagons and three wheelers used for business or professional purposes (excluding carriage of goods or use for hire or reward or racing etc.) are also done under this tariff.

The country is divided into two zones as indicated earlier and the rate for comprehensive risks varies between the zones.

Policies can also be issued covering:

1. Third party risks and fire and/or theft risks only



## 2. Fire and/or theft risks only for cars laid up in the garage

The following are the extra benefits granted in conjunction with the standard cover for which suitable additional premium as indicated in the tariff, will have to be charged:

1. Personal accident benefits, as per scales provided, to insured, insured's spouse, any named person or unnamed passengers in the age group 16-65.
2. Legal liability to employees of the insured who may be traveling in or driving the employer's car (other than paid drivers)
3. Wider legal liability to driver/cleaner
4. Legal liability to soldiers, sailors, airmen, employed as drivers
5. Addition to luggage and caravan trailers
6. Riot and strike risk
7. Earthquake
8. Flood inundation, typhoon, hurricane, cyclone and storm.
9. Loss or damage to rugs, coats and luggage

Extension of policy to cover reliability trains and motor rallies.

### **Motor Cycle Tariff:**

This tariff applied to motor cycles, Auto cycles and Motor scooters used for social, domestic and' pleasure purposes and for the insured's business or profession. (excluding carriage of goods and use for hire or reward, tuition, racing etc.)

The premium rate is uniform throughout the country. It depends on the cubic capacity of the engine and the value of the vehicle for comprehensive risks. Only cubic capacity is considered for Third party' and 'ACT' only risks. The policies can also be issued covering (a) third party risks and fire and/or theft risks only; (b) fire and/or theft only for vehicles laid up in garage.

### **Extra benefits:**

The following are the additional benefits that can be covered under the motor cycle policy, subject to charging additional premium as provided for in the tariff.

- Legal liability to passengers inside cars
- Personal accident benefits to insured or any named person (other than pillion passengers)
- Riot and strike
- Earthquake
- Flood, inundation, typhoon, hurricane, cyclone and hail-storm
- Loss of accessories by theft
- Extension of policy to cover reliability trials and rallies



## Commercial vehicle tariff:

This tariff is applicable to all vehicles not provided for under the private car or motor cycle tariff. A uniform rate of premium is chargeable on an All India basis. The premium rating depends on the carrying capacity and value for comprehensive risks. Carrying capacity alone is considered for third party and act only risks for each class of vehicles as outlined below:

Goods carrying vehicles and trailers	(a) Own goods (private carrier) and trailers (b) Public carrier
Passenger service vehicle	(a) Buses (public passenger service vehicle or stage carriage) (b) Taxis (contract carriage) (c) Others (hotel, school omni buses etc.)
Miscellaneous and Special	Tractors, Cranes, Ambulances etc.

### Types of vehicles:

- Policies can also be issued covering
- Third party risk and fire and/or theft risks only
- Fire and/or theft risks only for vehicles laid up in garage
- Comprehensive risks during body building or overhauling or premiums as provided for in the tariff.

### Extra benefits:

- Legal liability-for accidents to non-fare paying passengers
- Legal liability to accidents to passengers carried for hire or reward
- This cover has to be compulsory obtained by the owner as per the Motor vehicles Act in respect of passenger vehicles. Omission to do so will, however, not entitle the insurer to repudiate claims from passengers.
- Increase in indemnity for damage to third party property
- Riot & strike

### Earthquake:

- Wider legal liability covers driver, cleaner etc.
- Flood and allied risks

There are compulsory excesses and exclusion for certain classes of vehicles insured, on comprehensive terms. Some of them are listed below for ready reference.



**Motor trade policies:** The premium rating depends on the number of trade certificates and the transit distance involved. It may be noted that for any claim to be recovered, the vehicle must have the trade place attached to it at time of accident.

**Extra benefits:**

The following extra benefits can be granted by charging appropriate additional premium:

- Legal liability to passengers
- Increase in indemnity to third parties for injuries and property damage
- Riot and strike
- Earthquake
- Demonstrations
- Driving tuition

**Wider legal liability to paid drivers Certificate of insurance**

The only evidence acceptable to the policy authorities of the existence of valid insurance as required by the Motor Vehicle Act 1939 is a certificate of insurance issued by the insurer. The certificates are not required to be stamped. The certificate of insurance has to be produced when demanded by, the authorised police officer. The particulars contained in the certificate of insurance differ according to the type of vehicle covered.

Certificate of insurance must never be back-dated. Hence if a policy is not renewed on or before the date of expiry, the certificate of insurance in respect of new insurance will be effective only from the date of new insurance.

For every renewal a fresh certificate has to be issued. If there is any alteration in the risk during the currency of the insurance, the old certificate is called back and a fresh certificate is issued. Duplicate certificates in lieu of the defaced, mutilated or lost certificates can be issued, provided and the prescribed fee is paid by the insured and the requisite declaration as to the circumstances of the loss of the previous certificate is made.

**General Tariff Regulations:**

Some of the more important tariff regulations are listed below: Policies should not be issued for longer than 12 months.

For insurance for periods less than 12 months, short period scale or rates should be charged. When the policy is extended to suit the convenience of the insured with regard to renewal date, pro-rate premium may be collected.

- Agreed value policies may not be issued.
- Geographical area can be extended as provided.
- Premium and reductions should be shown in the policy.
- Payment of premium in installments is not permitted.



Transfer of insurance from one owner to another is permitted subject to pro-rata adjustment of premium for type value, use, geographical area, discounts etc.

Transfer fee for issuing new certificate will be Rs. 5/-

Policies should not be issued in the joint names of hirer and owner (financier). They should be issued in the name of the hirer with the owner's interest protected by prescribed endorsement.

Additional vehicles can be included in a policy at pro-rata premium.

Return on premium for cancellation of insurance following sale of vehicle, has been provided for. The important aspect to be noted is, that no refund can be allowed if there has been a claim since the last renewal date. Interim cover note should be issued in prescribed forms for not more than 15 days at the time for a maximum of two extensions after issue.

Differential scales of 'no claim' discount for private cars and other vehicles should be noted.

When the insurance is transferred from one insurer to another, the new insurer can allow the 'no claim' discount earned with the previous insurer. If the transfer is from a company outside India, the 'no claim' discount should be refixed as per our scale.

No claim discount follows the fortunes of the insured and not the vehicle. On transfer of insurance, it has to be withdrawn unless the buyer is entitled to it under a policy held by him previously.

No claim discount should be disallowed if the policy is not renewed within 90 days of the date of expiry. If the vehicle has been sold, no claim discount can be allowed against any new insurance effected within three years. For defence personnel on active field duty, the limit of 90 days has been increased to 180 days.

Intimation of a claim under the third party portion of the cover does not despire the insured of his 'no claim bonus'. This is applicable only for the own damage portion.

Riot and strike clause cannot be extended in the case of third party or act policies.

Concessions are provided for vehicles laid up under certain conditions. The important point to be noted, is that the period of suspension of cover under for lay-up period, shall not extend beyond the next renewal date. It shall be for a minimum period of at least two months. The lay-up period will be counted only from the date of the certificate of insurance.

**Claims (own damage claims):** The inspector should show the same interest in helping the insured when claims arise, as he evinces when he tries to book the business.

Claims in motor insurance require efficient handling. As soon as an accident occurs, the insured has to give immediate notice to the office concerned. The office must check the policy papers to ascertain whether the policy was in force on the date of the accident. They should also make sure that the loss of damage is due to an insured peril. Thereafter a claim form should be obtained in duplicate from the insured.

The insurer should arrange for an immediate survey of the damaged vehicle by a motor claims investigator on the spot of the accident or the repairer's workshop. The survey can be waived if the amount involved is less than Rs. 350/-. Here if the estimate is found reasonable,



a departmental inspection may be carried out. Photographs of the damaged vehicles must be taken as evidence of damage.

**Knock-for-knock Agreement:** The knock-for-knock agreement is an agreement entered into among the insurers writing motor insurance. The agreement provides that in the event of damage caused by collision or attempt to avoid collision between two vehicles, the insurer of each vehicle will bear his own loss within the limits of his policy, irrespective of legal liability and will not enforce his subrogation rights, if any, against the other insurer. This agreement covers all vehicles which are not playing for hire or reward.

**Limits of Acceptance:** All Branch offices are authorised to accept insurance of Motor vehicles without limits as to the sum insured. Advice of large risk acceptance with sum insured exceeding Rs. 5 lakhs shall be given to GIC in the prescribed form with a copy to the Divisional office and the Regional office.

All additional risks provided for in the India Motor Tariff can be granted without reference to the Divisional/Regional Office.

Inspectors are authorised to accept insurance of Motor vehicles upto Rs. 1 lakh. For risks of higher value, they shall seek permission of the branch office in the prescribed form.

Motor Insurance Comprehensive policies:

	Private Car	Motor Cycle	Commercial Vehicle
<b>Section: I Cover</b>	Loss of and/or damage to the vehicle and/or its accessories whilst thereon by Accidental external means	Same as for Private car but excluding frost	Same as for Private car but excluding frost
	Fire, external explosion self-ignition/frost Malicious damage		
	Whilst in transit by road, rail, inland waterway, lift or elevator		
	Burglary, house-breaking, theft		
		Burglary, house-breaking or theft of accessories only when the vehicle is stolen at the same time	Burglary, house - breaking or theft of accessories only when the vehicle is stolen at the same time



<b>Exclusions</b>	Consequential loss, depreciation, wear and tear, mechanical and electrical break-downs, failures or breakage	Same as for private car	Same as for private car
	Damage to tyres, unless the vehicle is damaged at the same time, when cost of tyre upto 50% of cost of replacement is only payable	Same as for private car	Same as for private car (fully excluded for public carriers and buses)
			Damage caused by over-loading or strain or by explosion of the boilers of the vehicles
Reasonable cost of protection and charges of towing of accident damaged vehicle to nearest workshop and re-delivery.	Maximum Rs. 300/-	Rs. 100/-	Rs. 300/-
Limit of authority to insured to carry out accident repairs subject to a detailed estimate being submitted to the insurer	Rs. 300/-	Rs. 50/-	
<b>Section II(A)</b>			
Liability towards			
Death or bodily injury to any person including occupants carried provided that such occupants are not carried for hire or reward	Admissible	Not admissible	Not admissible



## PART-E

### Major Contents of Part E:

- Commercial Insurance
- Advantages of Insurance
- Disadvantages of Insurance

### **Commercial Insurance:**

Commercial insurance is used in a risk management program. It is appropriate for loss exposures that have a low probability of loss but for which the severity of loss is high.

If the risk manager uses insurance to treat certain loss exposures, five key areas must be emphasised:

- Selection of insurance coverages
- Selection of an insurer
- Negotiation of terms
- Dissemination of information concerning insurance coverages
- Periodic review of the program

First, the risk manager must select the insurance coverages needed. The coverages selected must be appropriate for insuring the major loss exposures identified in step one. To determine the coverages needed, the risk manager must have specialised knowledge of commercial property and liability insurance contracts.

The risk manager must also determine if a deductible is needed and the size of the deductible. A deductible is a provision by which a specified amount is subtracted from the loss payment otherwise payable to the insured. A deductible is used to eliminate small claims and the administrative expense of adjusting these claims. As a result, substantial premium savings are possible. In essence, a deductible is a form of risk retention.

Most risk management programs combine the retention technique with commercial insurance. In determining the size of the deductible, the firm may decide to retain only a relatively small part of the maximum possible loss. The insurer normally adjusts any claims, and only losses in excess of the deductible are paid.

Another approach is to purchase excess insurance – a plan in which the insurer does not participate in the loss until the actual loss exceeds the amount a firm has decided to retain. A firm may be financially strong and may wish to retain a relatively larger proportion of the maximum possible loss. The retention limit may be set at the maximum probable loss (not maximum possible loss).



Second, the risk manager must select an insurer or several insurers. Several important factors come into play here, including the financial strength of the insurer, risk management services provided by the insurer, and the cost and terms of protection. The insurer's financial strength is determined by the size of policy owners' surplus, underwriting and investment results, adequacy of reserves for outstanding liabilities, types of insurance written, and the quality of management. Several trade publications are available to the risk manager for determining the financial strength of a particular insurer. Best Company, which rates insurers based on their relative financial strength.

The risk manager must also consider the availability of risk management services in selecting a particular insurer. An insurance agent or broker can provide the desired information concerning the risk management services available from different insurers. These services include loss-control services, assistance in identifying loss exposures, and claim adjustment services.

The cost and terms of insurance protection must be considered as well. All other factors being equal, the risk manager would prefer to purchase insurance at the lowest possible price. Many risk managers will solicit competitive premium bids from several insurers to get the necessary protection and services at the lowest price.

Third, after the insurer or insurers are selected, the terms of the insurance contract must be negotiated. If printed policies, endorsements, and forms are used, the risk manager and insurer must agree on the documents that will form the basis of the contract. If a specially tailored manuscript policy is written for the firm, the language and meaning of the contractual provisions must be clear to both parties. In any case, the various risk management services the insurer will provide must be clearly stated in the contract. Finally, if the firm is large, the premiums may be negotiable between the firm and insurer. In many cases, an agent or broker will be involved in the negotiations.

In addition, information concerning insurance coverages must be disseminated to others in the firm. The firm's employees and managers must be informed about the insurance coverages, the various records that must be kept, and the risk management services that the insurer will provide. Those persons responsible for reporting a loss must also be informed. The firm must comply with policy provisions concerning how notice of a claim is to be given and how the necessary proofs of loss are to be presented.

Finally, the insurance program must be periodically reviewed. This review is especially important when the firm has a change in business operations or is involved in a merger or acquisition of another firm. The review includes an analysis of agent and broker relationships, coverages needed, quality of loss control services provided, whether claims are paid promptly, and numerous other factors. Even the basic decision – whether to purchase insurance or retain the risk – must be reviewed periodically.

### **Advantages of Insurance:**

The use of commercial insurance in a risk management program has certain advantages:

- The firm will be indemnified after a loss occurs. The firm can continue to operate and may experience little or no fluctuation in earnings.



- Uncertainty is reduced, which permits the firm to lengthen its planning horizon. Worry and fear are reduced for managers and employees, which should improve their performance and productivity.
- Insurers can provide valuable risk management services, such as loss-control services, exposure analysis to identify loss exposures, and claims adjusting.
- Insurance premiums are income-tax deductible as a business expense.

### **Disadvantages of Insurance:**

The use of insurance also entails certain disadvantages and costs:

- The payment of premiums is a major cost, because the premium consists of a component to pay losses, an amount for expenses, and an allowance for profit and contingencies. There is also an opportunity cost. Under the retention technique, the premium could be invested or used in the business until needed to pay claims. If insurance is used, premiums must be paid in advance, and the opportunity to use the funds is foregone.
- Considerable time and effort must be spent in negotiating the insurance coverages. An insurer or insurers must be selected, policy terms and premiums must be negotiated, the firm must cooperate with the loss-control activities of the insurer, and proof of loss must be filed with the insurer following a loss.
- The risk manager may have less incentive to follow a loss-control program, because the insurer will pay the claim if a loss occurs. Such a lax attitude toward loss control could increase the number of noninsured losses as well.



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# STUDY NOTE - 8

## Corporate Risk Management

### PART - A

#### Major Contents of Part A:

- Different Corporate Risks
- Unsystematic Risk
- Corporate risk Management Strategies

The risk is understood as the sacrifice made by an individual by deferring the use of money to a future day by investing that money in a venture promising a higher return which has uncertainty. The forces that contribute to the variations in return can both be external or internal to a company in which an individual has invested. These forces can partly be controllable and the remaining uncontrollable. The uncontrollable portion, which is essentially external, is known as systematic risk and the controllable internal risk is known as unsystematic risk.

The external or systematic risk can be classified as three types of risk:

**Market Risk:** Variability in return on investments in the market is referred to as market risk.

This is caused by investor reaction to the tangible as well as intangible events. Tangible events like economic, political, social events and intangible events arising out of a market psychology or the other factors like interest rates and inflation also form part of the forces behind market risk.

**Interest Rate Risk:** This risk refers to the uncertainty of market volumes in the future and the quantum of future income caused by the variations in the interest rates. These interest rates are normally controlled by the Reserve Bank of India in our country and the exigencies for changing the interest rates arise out of many economic factors which are monitored by the central bank i.e, R.B.I. Normally, when the interest rates increase the companies with higher quantum of borrowed money will have to pay out higher quantum of interest reducing their earnings and vice versa.

**Purchasing Power Risk:** Purchasing power risk is the uncertainty of the purchasing power of the monies to be received, in the future. In short purchasing power risks refers to the impact of inflation or deflation on an investment. Prudent investors normally include a premium for purchasing power risk in their estimate of expected return.

**Exchange Risk:** With the globalisation of market cross border transactions are on the increase. Balance of payments comprising the net effect of exports and imports are subject to fluctuation in the various currencies. As recently, the strengthening of Rupee against the Dollar imports has made imports cheaper and exports costlier. The need to recognize this exchange risk is



obvious as the international trade operations may be profitable or loss-making unless this risk is taken care of.

**Unsystematic Risk:** Unsystematic Risk is that fraction of total risk which is unique to a company or an Industry due to inherent internal factors like managerial capabilities, consumer responsiveness, Labour unrest, etc. The operating environment of the business and the financing modalities involve this unsystematic risk. The first one is known as the Business Risk and the second is the Financial Risk.

**Business risks** can be again divided into internal and external business risks. Internal business risk is mainly due to the variations in the operational efficiency of the company. The external business risks arise out of circumstances imposed on the company by external forces like business cycle, certain statutory restrictions or sops.

**Financial risk** is associated with the modalities adopted by a company to finance its activities. For instance the financial leverage like the Debt Equity Ratio or the type of borrowings and the variations thereof introduce financial risk. Lower the debt less is the financial risk.

Financial risks arising out of assets and liabilities need to be aggregated. A composite risk picture has to be drawn by following an approach known as “building block”. Asset liability management is a technique to compute matching of assets and liabilities by which a prudent management of an investment portfolio can be properly taken care of.

Asset liability management is defined as “maximising the risk adjusted returns to shareholders over the long run”. It is also defined as management of total balance sheet in terms of size and quality (composition of assets and liabilities).

### Corporate Risk Management Strategies:

In risk management, the following strategies are generally adopted:

**Risk Avoidance** is a strategy by which the organisation does not engage in the activity which involves any risk.

**Risk Reduction** is another strategy where the organisation takes two steps. One is preventing the occurrence of risk and the second one is controlling the number of occurrences. One of the possible ways of reducing the risk is going for large number.

**Risk Retention** is the most popular method of dealing with risk. Risk retention may be conscious or unconscious. Conscious risk retention takes place when the risk is perceived and not transferred or reduced. When a risk is not recognised, it is unconsciously retained.

**Risk Transfer** is another method of managing risk. Risk can be transferred to a person willing to take it. Hedging or insurance are best examples for risk transfer.

**Risk Sharing** is process by which the potential risk is shared among many, so that the loss is not borne by a single person.



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## PART- B

### Major Content of Part B:

- Financial Risk Management

### Financial Risk Management

Business firms face a number of speculative financial risks. Financial risk management refers to the identification, analysis, and treatment of speculative financial risks. These risks include the following:

- Commodity price risk
- Interest rate risk
- Currency exchange rate risk

#### Commodity Price Risk:

It is the risk of losing money if the price of a commodity changes. Producers and users of commodities face commodity price risks. For example, consider an agricultural operation that will have thousands of bushels of grain at harvest time. At harvest, the price of the commodity may have increased or decreased, depending on the supply and demand for grain. Because little storage is available for the crop, the grain must be sold at the current market price, even if that price is low. In a similar fashion, users and distributors of commodities face commodity price risks. Consider a cereal company that has promised to deliver 500,000 boxes of cereal at an agreed-upon price in six months. In the meantime, the price of grain – a commodity needed to produce the cereal – may increase or decrease, altering the profitability of the transaction.

#### Interest Rate Risk:

Financial institutions are especially susceptible to interest rate risk. Interest rate risk is the risk of loss caused by adverse interest rate movements. For example, consider a bank that has loaned money at fixed interest rates to home purchasers under 15- and 30-year mortgages. If interest rates increase, the bank must pay higher interest rates on deposits while the mortgages are locked-in at lower interest rates. Similarly, a corporation might issue bonds at a time when interest rates are high. For the bonds to sell at their face value when issued, the coupon interest rate must equal the investor-required rate of return. If interest rates later decline, the company must still pay the higher coupon interest rate on the bonds.

#### Currency Exchange Rate Risk:

The currency exchange rate is the value for which one nation's currency may be converted to another nation's currency. For example, one Canadian dollar might be worth the equivalent of two-thirds of one U.S. dollar. At this currency exchange rate, one U.S. dollar may be converted to one and one-half Canadian dollars.



U.S. companies that have international operations (such as NPP's Canadian operations) are susceptible to currency exchange rate risk. Currency exchange rate risk is the risk of loss of value caused by changes in the rate at which one nation's currency may be converted to another nation's currency. For example, a U.S. company faces currency exchange rate risk when it agrees to accept a specified amount of foreign currency in the future as payment for goods sold or work performed. Likewise, U.S. companies with significant foreign operations face an earnings risk because of fluctuating exchange rates. When a U.S. company generates profits abroad, those gains must be translated back into U.S. dollars. When the U.S. dollar is strong (that is, when it has a high value relative to a foreign currency), the foreign currency purchases fewer U.S. dollars and the company's earnings therefore are lower. A weak U.S. dollar (that is, when it has a low value relative to a foreign currency) means that foreign profits can be exchanged for a larger number of U.S. dollars, and consequently the firm's earnings are higher.

### **Managing Financial Risks:**

The traditional separation of pure and speculative risks meant that different business departments addressed these risks pure risks were handled by the risk manager through risk retention, risk transfer, and loss control. Speculative risks were handled by the finance division through contractual provisions and capital market instruments. Examples of contractual provisions that address financial risks include call features on bonds that permit bonds with high coupon rates to be retired, early and adjustable interest rate provisions on mortgages through which the interest rate varies with interest rates in the general economy. A variety of capital market approaches are also employed, including options contracts, forward contracts, and futures contracts, and interest rate swaps.

During the 1990s, some businesses began taking a more holistic view of the pure and speculative risks faced by the organisation, hoping to achieve cost savings and better risk treatment solutions by combining coverage for both types of risk. In 1997, Honeywell became the first company to enter into an "integrated risk program" with American International Group (AIG). An integrated risk program is a risk treatment technique that combines coverage for pure and speculative risks in the same contract. At the time, Honeywell was generating more than one-third of its profits abroad. Its integrated risk program provided traditional property and liability insurance, as well as coverage for currency exchange rate risk.

In recognition of the fact that they are treating these risks jointly, some organisations have created a new position. The chief risk officer (CRO) is responsible for treatment of risks (pure, speculative, and others) faced by the organisation? Combining responsibilities in one area permits treatment of the risks in a unified, and often more economical way. For example, the risk manager may be concerned about a large self-insured property claim. The financial manager may be concerned about losses caused by adverse changes in the exchange rate. Either loss, by itself, may not harm the organisation if the company has a strong balance sheet. The occurrence of both losses, however, may damage the business more severely. An integrated risk management program can be designed to consider both contingencies by including a double-trigger option. A double-trigger option is a provision that provides for payment only if two specified losses occur. Thus payments would be made only if a large property claim and a large exchange rate loss occurred. The cost of such coverage is less than the cost of treating each risk separately.



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## PART - C

### Major Contents of Part C:

- Futures and Options
- Forwards

**Futures and Options:** Futures and options are derivatives affording protection against exchange risk. While futures is a special form of forward contract, option is a unique instrument in that it affords opportunity to gain from favourable movements in exchange rates apart from protecting against downside.

A futures contract, or simply called futures, is a contract to buy or sell a stated quantity of a commodity or a financial claim at a specified price at a future specified date. The parties to the futures have to buy or sell the asset regardless of what happens to its value during the intervening period or what happens to be the price on the date for which the contract is completed.

Both the parties to the futures have a right to transfer the contract by entering into an offsetting futures contract. If not transferred until the settlement/specified date, then they have obligations to fulfil the terms and conditions of the contract. Futures are traded on the exchanges and the terms of the futures contracts are standardised by the exchange with reference to quantity, date, units of price quotation, minimum change in price (tick), etc. Futures can be of commodities such as agricultural products, oil, gas, gold, silver, etc., or of financial claims such as shares, debentures, treasury bonds, share index, foreign exchanges, etc.

In a futures contract, the parties fix the terms of the transaction and lock in the price at which the transaction will take place between them at future date. The futures contract, as they appear to be, providing for the physical delivery of the asset, however, in practice most of the futures are settled by offsetting futures contract. If a particular futures is not settled by the party himself then it will be settled by the exchange at a specified price and the difference is payable by or to the party. The basic motive for a future is not the actual delivery but the hedging for future risk or speculation. Further, in certain cases, the physical asset does not exist at all. For example, in case of Stock Index Futures, the Index is the weighted average price and cannot be delivered. So, such futures must be cash settled only.

Futures are traded at the organised exchanges only. Some of the centres where futures are traded are Chicago Board of Trade, Tokyo Stock Exchange, London International Financial Futures Exchange (LIFFE), etc. The exchange provides the counter-party guarantee through its clearing house and different types of margins system. Futures contracts are marked to market at the end of each trading day. Consequently, these are subject to interim cash flows for adverse or favourable price movement. With reference to trading in Stock Index Futures, SEBI has provided that the participating parties have to deposit an initial cash margin as well as that difference in traded price and actual price on daily basis. At the end of the settlement period or at the time of squiring off a transaction, the difference between the traded price and settlement



price is settled by cash payment. No carry forward of a futures contract is allowed beyond the settlement period. National Stock Exchange (NSE) has issued the Futures and Options Regulations, 2000 which are applicable to the derivative contracts (both futures and options) traded at the NSE.

**Currency Futures:** A futures contract is a form of forward contract in that it conveys the right to purchase or sell a specified quantity of a foreign currency at a fixed exchange rate on a specified future date. Whereas in a forward contract the quantum of foreign currency and the due date are determined by the customer, in a futures contract these are standardised. While forward contract can be entered into by a person with any bank at any place, the futures contract can be entered into only with the financial futures exchanges. Thus, a futures contract may be defined as an agreement entered into with the specified futures exchange to buy or sell a standard amount of foreign currency at a specified price for delivery on a specified future date.

### Features of a Futures Contract:

The salient features of a futures contract, which also distinguish it from forward contract, are as follows:

- 1. Futures Exchanges.** A forward contract can be entered into with any bank, and hence termed an over-the-counter product. A futures contract can be traded only on a recognised futures exchange. There are over 50 futures exchanges spread over the world. The important among them are the International Monetary Market (IMM) – part of Chicago Mercantile Exchange, and London International Financial Futures Exchange (LIFFE). Futures trading began at IMM of Chicago Board of Trade in 1972, which continues to be the leading futures market of the world.
- 2. Size of Contract.** The size of the transaction is standardised. For instance, at LIFFE, the contract in sterling can be only in multiples of GBP 62,500 and that in Euro in multiples of Euro 100,000. Similarly, at Chicago Mercantile Exchange, the standard size of a futures contract is British Pound 62,500, Canadian dollar 100,000, Euro 100,000, Japanese Yen 12,500,000, and so on. These figures represent the value of one future. In all futures contracts, the stated currency is the foreign currency that is being bought or sold against US dollar.
- 3. Delivery Dates.** The due dates of the contracts fall on a specified day in specified months in a year, generally on quarterly basis. For instance, at Chicago exchange, the specified months are March, June, September and December and the delivery date is third Wednesday of the respective month. The month during which a contract expires is referred to as the spot month. All trading stop two business days prior to the delivery date to enable the participants deliver the currencies, as in the case of spot market.
- 4. Price Movements.** The price for the futures is quoted as so many units of US dollar per unit of foreign currency. The value of the futures will be the price per unit of foreign currency multiplied by the size of the contract. For instance, the Euro futures may be bought at a price of USD 1.10. Since the standard size of Euro futures is EUR 1,00,000, its value is USD  $1.10 \times 1,00,000 = \text{USD } 1,10,000$ .



The exchange may fix the minimum size of price movements, called tick. For instance, the tick may be USD 0.0001 for Euro, which amounts to a tick value of USD 10 per contract of EUR 100,000. The exchange may also fix the maximum intra-day movements of the price. If the price varies beyond the limit prescribed, as compared to the closing price of the previous day, the trading may be suspended to assess the situation. The exchange may permit further trading after the margin accounts are properly adjusted.

5. **Trading by Members.** Buyers or sellers of futures contracts place orders with exchange brokers or exchange members. These orders are communicated to the floor of the futures exchange. The price for a given number of contracts will be negotiated by open outcry in the trading pit. The deal is struck when someone is willing to buy and some other is willing to sell at the agreed price. The price keeps changing depending upon the demand and supply. For each contract, there is one person who buys the futures (or takes a long position) and another who sells (or takes a short position). The number of outstanding two-sided contracts at any given time gives the open interest.
6. **Dealing with Clearing House.** Although two members conclude a deal between themselves, one buying and the other selling, the clearing house of the futures exchange is interposed between the deals and both the deals are with the clearing house only. Thus the member who buys the futures has to accept delivery from the clearing house and the member who sells has to deliver the foreign exchange to the clearing house. This arrangement safeguards the interests of the members against the failure of the counterparty.
7. **Margins.** As stated above, the clearing house assumes the counterparty risk in the futures contract. In order to ensure their liquidity and thereby safety for the clearing house, the members are required to keep with the clearing house margin ranging from 2.5% to 10% of the contracts outstanding in their names, in the form of cash, treasury bills or letters of credit. The margin that is required to be deposited at the time of entering into the contract is the initial margin. Another level of margin, lesser than the initial margin, is also prescribed which is known as the maintenance margin. The margin money will be adjusted (i.e., balance reduced or increased) with the change in the current value of futures. If the margin money is reduced below the maintenance level the member is expected to bring in additional amount and restore the margin at least to the initial level.
8. **Marking to Market.** As noted above, although the contracts are to be delivered on the due date, the value of each outstanding contract is determined every day by reference to the closing quotation and any excess or shortage is adjusted in the margin account of the concerned member. This process of revaluing the contract based on the ruling price for futures is known as marking to market. By marking the contract to market and adjusting the margin money accounts, the clearing house ensures the continued liquidity of the members and minimise for itself the counterparty risk. The buyer of futures contract gains by an increase in the value of the contract. His margin account is increased by this value. Correspondingly, the seller loses and his margin account is reduced by the value. This is only a notional gain/loss because the contract has to be settled at the ruling price for the contract. The gain/loss on the margin account will be compensated by the loss/gain in the value of the contract. On the date of settlement, the buyer pays the price for the contract at the ruling rate for the futures which will be same as the spot rate.



9. **Liquidity.** One salient feature of futures that commends it as a hedging instrument is its liquidity. The buyer of the futures need not hold it till maturity. On any intermediary date he can sell to another and wind up his position with the exchange. Similarly a seller can enter into a purchase deal before the due date and square his position. In fact it is for this reason that futures are sometimes described as a bet on the future price of the currency, rather than an obligation to buy the currency. Most of the futures contracts are not delivered on the due date, but extinguished by counterdeals. As the delivery date approaches, the open interest (number of outstanding two-sided contracts) falls steeply.
10. **Delivery.** If the contract is held up to the due date, it will be settled by exchange of currencies.

### Forwards and Futures:

Apparently, forwards contracts and futures contracts seem to be similar. Both relate to a contract to be fulfilled on a future date at the prespecified rate for a specific quantity. However, there are a number of differences between the forwards and the futures. The forwards contracts are private bilateral contracts. These are traded at exchanges and are exposed to default risk by either party. Each forward contract is unique in terms of size, time and types of assets, etc. The price fixation may not be transparent and is not publicly disclosed. A forward contract is to be settled by delivery of the asset on the specified date.

On the other hand, futures contract is a contract to buy or sell a specified quantity of a commodity or a specified security at a future date at a price agreed to between the parties. Since, these contracts are traded only at organised exchanges, these have built-in safeguard against default risk, in the form of stock brokers or a clearing house guarantee. The idea behind futures contracts is to transfer future changes in the prices of securities from one party to another. These are tradable and standardised contracts in terms of size, time and other features. These contracts are transparent, liquid and tradable at specified exchanges. Futures also differ from forwards in that they are subject to daily margins and fixed settlement period.

Futures contracts have evolved out of forwards and possess many of the characteristics of forwards. In essence, futures are like liquid forward contracts. As against forwards, futures as a technique of risk management provide several services to the investors and speculators as follows:

- (i) Futures provide a hedging facility to counter the expected movements in prices.
- (ii) Futures help indicating the future price movement in the market.
- (iii) Futures provide an arbitrage opportunity to the speculators.

Futures have four specific characteristics as against the forwards:

1. Liquidity, as futures are transferable.
2. Standard volume.
3. Counter-party guarantee provided by the Exchange.
4. Intermediate cash flows.



## Pricing of Futures:

Futures, being a special form of forward contracts, are priced in the same way forwards are priced. The cash and carry arbitrage is the basis of pricing of futures. If the price of futures is significantly different from that of comparable forward contract, it would lead to arbitrage possibilities between the two instruments. Arbitrageurs will buy in the cheaper of the two markets and sell in the other market to make riskless profits. Large-scale operations by arbitrageurs will move the rates in the markets and the price under the two instruments will be made near equal.

The difference between forward and futures that has an impact on pricing is the cash flows involved. In forward there is only one cash flow on the due date when the contract is executed. In the case of futures, due to the practice of marking to market, there are a large number of intermittent cash flows. These intermittent cash flows carry interest cost. The size, direction and periodicity of the intermittent cash flows are difficult to be estimated at the time of entering into the future contract. Hence pricing of futures is more arduous than pricing of forwards.

Pricing of futures contracts depend on the following variables:

- (i) Price of the underlying asset in the cash market,
- (ii) Rate of return expected from investment in the asset, and
- (iii) Risk free rate of interest.

The mechanism of pricing of futures can be explained as follows: Suppose,

- (i) In cash market, the underlying asset X is selling at Rs. 100.
- (ii) The expected return from the asset is 3% per quarter.
- (iii) The risk free rate of borrowing or lending is 8% p.a. or 2% per quarter.
- (iv) The futures contract period is also a quarter.

What should be price of futures?

Say,  $S$  = Current spot price of the asset  
 $F$  = Futures price  
 $r$  = % Financing cost per futures period  
 $y$  = % Yield on investment per futures period

Now,  $F = S + S(r - y)$

Suppose, the investor borrows funds to purchase one unit of asset 'X' resulting in no initial cash outlay for his strategy. At the end of 3 month's period, Rs. 3 will be received from holding the asset 'X' and would be required to pay interest (financing cost) of Rs. 2.

In the example given above,

$$F = 100 + 100(0.02 - 0.03) = \text{Rs. } 99$$

So, the futures price should be Rs. 99. What happens if the futures price is Rs. 92 or Rs. 107? The position can be explained as follows:



In case, the futures contracts are available at Rs. 92 (i.e., less than the theoretical price of Rs. 99), the investor should buy one future contract for Rs. 92 and should sell one unit of asset 'X' for Rs. 100 and invest the money @ 8% p.a. for 3 months. After 3 months, he will receive the proceeds of Rs. 102 (Rs. 100 + Rs. 2). He will spend Rs. 92 to purchase an asset (out of futures contract). Besides, he will not receive the yield of Rs. 3 from the asset. So, his cost is Rs. 95 (92 + 3). His gain would be Rs. 7 (Rs. 102 - 95).

Similarly, if the futures contract price is Rs. 107, he should sell the futures contract at Rs. 107 and should borrow Rs. 100 now to buy one unit of asset 'X' in the spot market. After 3 months, his proceeds would be Rs. 110 (107 + 3) and payment would be Rs. 102 (100 + 2). He would be able to make a profit of Rs. 8.

So, if the futures price is other than the theoretical price of Rs. 99, it would give rise to arbitrage opportunities. In case of price of Rs. 92 or Rs. 107, investors can look for a riskless arbitrage profit of Rs. 7 or Rs. 8. The demand and supply forces would react to this arbitrage opportunity and the futures price would settle around the equilibrium level of Rs. 99.

The procedure for pricing the futures can be standardised in 3 different situations as follows:

(a) When the asset provides no income:

$$F = S \times e^{rt}$$

(b) Where the asset provides known dividend:

$$F = (S - I) \times e^{rt}$$

(c) Where the asset provides a known dividend yield:

$$F = S \times e^{(r-q)t}$$

Where F = Futures Price

S = Spot price of the underlying asset.

e = 2.71828

r = Rate of interest on borrowing/lending

t = Time of futures

I = Present value of expected dividend @ 'r'

q = Dividend yield.

### Example 1:

Current NIFTY is 1800 and minimum lot is 100. Risk free rate is 8% and the futures period is 3 months. The fair value of 3 months NIFTY futures is as follows:

$$F = S \times e^{rt} = 1800 \times 2.71828^{0.08 \times (3/12)} = \text{Rs. } 1836.36$$

### Example 2:

A share is selling at Rs. 900. Dividend of Rs. 40 is expected after 6 months and 12 months. The risk free rate is 9%. What is the price of the 12 months futures? The futures price would be as follows:



$$\begin{aligned} F &= (S - I) \times e^{rt} \\ \text{Where } I &= \text{Rs. } 40 \times e^{(-0.09 \times 6/12)} + 40 \times e^{-0.09} \\ &= \text{Rs. } 38.24 + \text{Rs. } 36.56 = \text{Rs. } 74.80 \\ \text{Now } F &= (\text{Rs. } 900 - 74.80) \times 2.71828^{(0.09)} = \text{Rs. } 902.91 \end{aligned}$$

It may be noted that for the calculation of I, the factor W has been taken negative. The reason being that the variable I is the present value of dividend. The present value of dividend in the above calculations has been calculated by 'e' factor. Alternatively, the present value can be calculated with the help of PVF(r,n) also. Further, the first dividend payment of Rs. 40 has been discounted for 6 months, while the second dividend payment has been discounted for 1 year.

### Example 3:

Market price of a share at present is Rs. 930 with transaction cost of 2%. A dividend yield of 5% is expected. Risk free rate of return is 10%. Find out 3 months futures price. The expected futures price is:

$$\begin{aligned} F &= S \times e^{(r-q)t} - (S \times 0.02) \\ &= \text{Rs. } 930 \times 2.71828^{(0.10 - 0.05)(3/12)} - 18.60 \\ &= \text{Rs. } 941.69 - 18.60 = \text{Rs. } 923.09 \end{aligned}$$

It may be noted that the transaction cost of 2%, i.e., Rs. 18.60 has been deducted to find out the futures price. If the actual price of futures is different from the theoretical prices calculated in the Examples 1 to 3, then the arbitrage opportunities would exist. A seller (buyer) of a futures contract makes a profit if the futures price decreases (increases). The seller of a futures contract incurs a loss when the futures price increases. As only initial margin is required to take a position in futures market, the futures provide investors with substantial leverage for the money invested.

In actual practice, the futures prices converge to the cash price at the settlement date. There are reasons why the futures prices will differ from the cash prices. Through the act of arbitrageurs, the futures prices remain within a range to the cash prices. The actions of the arbitrageurs assure that the price discovery in the futures market will be transmitted to the cash market.

**Hedging with Futures:** A forward contract affords perfect protection to the hedger. The size of the contract and its due date can be to the requirement of the hedger. Forward contract, therefore, affords complete protection against exchange risk. The user of the forward contract is not affected by any change in the exchange rates as he is certain to receive or pay at the contractual rate irrespective of the spot rate prevailing.

Yet future contracts are preferred to forward contracts under three situations. First, forward contracts for long periods and for large values may not be available for all currencies. Secondly, futures being standard product may cost less than forward which is a tailor-made product. Thirdly, the facility of liquidity available under futures is not available under forwards.

However, futures do not provide a perfect cover for the following reasons:

- (a) The due dates for receipt/payment of foreign exchange and for futures do not always match;
- (b) The amounts may not match; and



## (c) Change in basis.

A person due to receive foreign exchange in future takes short position in futures. If the value of the underlying currency goes up, he gains in the foreign exchange market by selling at that rate. He loses in the futures market since he buys futures at a higher price to liquidate his short position. On the other hand, if the currency value depreciates, he loses in the foreign exchange market and gains in the futures market. Combined, the amount received or paid is same as original intention. Thus, the hedger is protected from exchange risk.

Since the delivery period under futures may not match exactly with the due date of the underlying contract, futures are generally bought to the next due date. The idea is to enter into an opposite deal on the due date of the underlying contract and square the position. For instance, if a company has EUR 1 million to be received in February, it may enter into futures contract for this amount due March. Say, the contract is entered into at USD 1.2000 per euro when the spot is USD 1.1700 per euro. The hedge can be considered perfect if it is able to realise per euro USD 1.1700. On the due date of entering into the futures contract, the difference between the spot rate and futures rate is USD 0.0300 per euro. If the same difference between spot rate and futures rate is maintained in February also, when the company squares up its position in futures, the company would indeed realise USD 1.2000 per euro and the hedge can be considered perfect. To illustrate this point, suppose the exchange rates in February are spot 1.1600 and futures 1.1900. The foreign exchange is received by the company. Since the futures are not yet due, to immediately dispose the foreign exchange received, it sells in the spot market. This leaves the position under the futures open. To square the position, it buys one futures in euro. The operations involved are:

(a)	Company sells in the spot market and receives per euro		USD 1.1600
(b)	Under futures :		
	It sold in January at	USD 1.2000	
	It buys in February at	USD 1.1900	
	It has to receive under futures		USD 0.0100
	Net amount received per euro		USD 1.1700

It is more likely that the difference between the spot rate and futures price changes with time. Generally, the futures price tends to converge with the spot rates as the due date nears. Therefore, there is more likelihood that in February the difference has difference has reduced. Assume the rates are spot 1.1650 and March futures 1.1850.

At these rates, the net amount per euro realised by the company would be:

(a)	Company sells in the spot market and receives per euro		USD 1.1650
(b)	Under futures :		
	It sold in January at	USD 1.2000	
	It buys in February at	USD 1.1850	
	It has to receive under futures		USD 0.0150
	Net amount received per euro		USD 1.1800



The net amount received is USD 1.1800 per euro and hence the hedge is not perfect.

Technically, the difference between the spot rate and futures price existing as on a date is known as the basis.

$$\text{Basis} = \text{Spot price} - \text{Futures price}$$

The risk that the basis may change between the dates that a futures contract is entered into and it is executed (or squared) is known as the basis risk. The existence of the basis risk is one of the factors that make hedging with futures less perfect.

In general basis risk increases as the time difference between the hedge expiration and delivery month increases. A rule of thumb to choose a delivery month as close to as but later than the expiration of hedge. The basis risk can worsen or strengthen the hedger's position.

### **Futures in India:**

The current exchange control regulations do not permit futures trading in currencies in India.

**Currency Options:** An option confers on the buyer the eligibility to buy or sell a sum of foreign currency at a predetermined rate on a future date, without investing him with an obligation to do so. On the due date the buyer of the option may elect to buy/sell as per his entitlement or he may choose to let it go unused. Either of the decision is binding on the seller, who has no such discretion.

Essentially, an option contract serves the similar purpose as a forward exchange contract, viz., to firm up the future payment/receipt in a foreign currency with regard to exchange rate in terms of the local currency. The difference between the forward contract and the option contract is that, under the forward contract, the customer is expected to deliver/receive the foreign exchange on the due date at the forward rate irrespective of the spot rate prevailing. Under an option contract, on the due date, the customer can make a reassessment of the situation and seek either execution of the contract or its non-execution as may be advantageous to him.

### **Features of Option Contracts:**

**Parties.** There are two parties to an option contract—the option buyer and the option seller. Option buyer is the holder of the right under the contract either to buy or sell one specific currency against another specific currency. Normally, it would be the exporter or importer or the corporate treasurer who would be buying the option from the option seller. Option seller, also known as the writer of the option, is the one who makes the right available to the buyer. He should deliver or accept delivery of the currency concerned when the right is exercised by the option buyer. Normally the writer of the option will be the bank which provides this instrument to its customers. The seller of the option is always at a disadvantageous position because the buyer will exercise his right only if the prevailing exchange rate is favourable to him. This also means that the rate is unfavourable to the seller.

**Call and Put Options.** A contract under which the option buyer has the right to purchase the specified currency is the call option. A contract conferring the right to the buyer to sell the specified currency is the put option. Generally, the US dollar is the base currency and the other currency of the contract is the foreign currency that is being bought or sold. For instance, in



a dollar/yen call option, the buyer acquires the right buy yen against dollar. Similarly, in a dollar/mark put option, the buyer acquires the right to sell mark against dollar.

**Premium.** The consideration for the seller to offer the right to the buyer is the premium. Thus premium is the fee payable by the buyer of the option to the seller at the time of entering into the contract. The premium paid is not refundable whether the buyer ultimately exercises his right or not.

**Strike Price.** The exchange rate at which the currencies are agreed to be exchanged under the contract is the strike price. The market price for option is not a single price. Varying prices may be quoted, each at a different premium. The premium charged would vary according to the market perception about the future exchange rate for the currency.

### Types of Instruments:

Three types of options are available. They are:

- OTC Options,
- Exchange Traded Options, and
- Options on Futures.

**Over-the-counter (OTC) Options** are available with individual banks. They are tailor-made to the requirements of the buyer with regard to the maturity, price and size of the contract. The buyer of the option bears the counterparty risk, i.e., the risk that the seller of the option, the bank may fail to fulfill its obligation under the contract. Normally this type of options is confined to contract of large volumes and between big players. Since this is non-standard variety the premium charged may also be higher.

**Exchange traded options** are physical currency options traded at an organised exchange. That is, similar to the OTC option, the buyer acquires the right to buy or sell the foreign currency but for standard maturities and in standard amounts. Thus it is akin to futures contracts and traded on the exchange. The contract is with the clearing house of the exchange and hence the counterparty risk is minimised.

**Options on futures** give the buyer of the option the right to buy/sell specific number of futures on specified exchange. Depending upon the strike price prevailing the buyer may exercise his option or forgo it. If the buyer of a call option exercises his option, he will receive a long-future contract in the currency. That is, he will become the buyer of the future contract in the exchange. Then the futures contract will be subject to other regulations like margin, marking to market, etc.

**Pay-Off Under Options:** The peculiarity of options is that the buyer has the right to exercise his right without obligation whereas the seller has only obligation. This gives rise to the situation that the buyer has unlimited possibility for making profits and the seller has unlimited possibility of incurring losses.

For the buyer of the option, the extent of loss is limited to the premium paid whereas theoretically there is no limit on the profit he can make. When the spot rate is better than the strike rate agreed under the option, exercising the option will result in loss to the buyer. However, in such case he will not exercise his right and instead let it expire. On the other hand, when strike rate is more



favourable than the spot rate, he gains by exercising his right under the option. The net gain will be the difference between the strike price and spot price, reduced by the premium paid. Therefore, for the option buyer, the extent of loss is limited whereas the potential for profit is unlimited. The position of the seller of the option is in juxtaposition to that of the buyer. His maximum gain is limited to the premium received, whereas, the extent to which he can lose is unlimited.

### **Execution of Contracts:**

Whether the buyer will exercise his right under the contract depends upon the spot price for the currency prevailing on the due date of the contract. Based on the prevailing spot price, the option contract may be considered (a) In-the-money, (b) Out-of-the-money, or (c) At-the-money.

### **In-the-money Options:**

An option is in-the-money when it would be advantageous for the holder of the option to exercise his right. Thus, a call option is in-the-money if on the maturity date the spot price for the currency being bought is higher than the strike price under the option contract. For instance, let us say that the strike price under the contract is Rs. 46.60 per dollar and in the market spot price for dollar is Rs. 46.75. It would be advantageous for the buyer of the option to exercise his option and obtain dollars at Rs. 46.60 and thereby save 15 paise per dollar. A put option, on the other hand, is in-the-market, if at maturity the spot price for the underlying currency is cheaper than the strike price under the contract. The difference between the option price and the spot price at maturity, which is in favour of the buyer is known as the intrinsic value of the option.

### **Out-of-the-money Options:**

An option is out-of-the-money if it is not advantageous for the buyer to exercise his right. A call option is out-of-the-money if the spot price for the currency bought under option is lower than the strike price agreed under the contract. A put option is out-of-the-money on the maturity date where the spot price for the currency sold is higher than the strike price under the option contract. When the option is out-of-the-money, the buyer does not exercise his right and the seller stands to gain by the premium he received under the contract.

**At-the-money, Options.** An option contract is at-the-money when the strike price is equal to the spot rate for the currency concerned on the due date of the contract. It makes no difference to either of the parties whether the buyer exercises the option or not.

### **Use of Options:**

An exporter who expects to execute the contract and receive foreign exchange after six months may enter into a 'put option' for six months which entitles him to sell the foreign currency on maturity at an agreed predetermined price (strike price). If on maturity, the spot price for the currency is more favourable to the exporter he may choose not to exercise his right of selling under the contract. He can instead sell in the market at the spot rate.

Similarly, an importer may enter into a 'call option' entitling him to buy the foreign currency on a future date.



Option contract is useful especially in covering exchange risk under contingent conditions like when the company enters into a bid. The exchange risk will arise only if the contract is awarded and foreign currency exposure arises. Other methods of hedging, such as forward contracts, will prove costly if the contract is not awarded and forward booked has to be cancelled.

### Option Contracts in India:

Options were made available in India effective from September 19, 1996. Separate regulations have been prescribed for rupee options and foreign currency options.

#### Foreign Currency-Rupee Options:

Banks may enter into Foreign Currency-Rupee Option contracts with their customers on back-to-back basis. Back-to-back basis means that they should have covered their position with market abroad. They are also permitted to run an options book subject to prior approval from the Reserve Bank. All guidelines applicable for forward contracts are applicable on rupee option contracts also.

#### Cross Currency Option:

1. A person resident in India may enter into a cross currency option contract (not involving the rupee) with a bank in India to hedge foreign exchange exposure arising out of his trade: Provided that in respect of cost-effective risk reduction strategies like range forwards, ratio-range forwards or any other variable by whatever name called, there shall not be any net inflow of premium. These transactions may be freely booked and/or cancelled.
2. Cross currency options should be written on a fully covered back-to-back basis. The cover transaction may be undertaken with a bank outside India, an off-shore banking unit situated in a Special Economic Zone or an internationally recognised option exchange or another bank in India.
3. All guidelines applicable for cross currency forward contracts are applicable to cross - currency option contracts also.
4. Banks desirous of writing options, should obtain a one-time approval, before undertaking the business, from RBI.

#### Products Available:

Banks in India are permitted to offer options of plain vanilla European type. They have also been permitted to offer risk reduction and cost-effective strategies subject to the condition that the customer does not become a net seller or earner of premium. Plain vanilla type options are pure call and put options.

The cost effective measures take the form of some exotic options important among which are the following:

1. **Barrier Options.** Barrier options take effect or are cancelled when a particular level in the spot rate is either reached or breached. There are two types of barrier options—knock-in options and knock-out options.



Knock-in options become effective when the spot rate reaches a particular level. The reaching of the specified level may be from a higher level to a lower level. In this case the option will be valid when the spot rate is below the specified level. Such option is 'down-and-in' option. If the option is to become effective when the spot rate is to be reached from below, it will be valid for all spot rates above the specified level. Such option is 'up-and-in' option.

A knock-out option becomes ineffective when the specified spot rate level is breached. The breach can occur from above, in which case the option is ineffective when the spot rate is below the specified level. The option is 'down-and-out' option. An option which becomes ineffective when the spot rate goes above a specified level is an 'up-and-out option'.

The premium payable on barrier options is lower than that on normal options because the range of circumstances in which the option is valid is reduced.

- 2. Participating Forwards.** The disadvantage of forward contract is that an exporter or importer who hedges his position by this instrument is not able to benefit from favourable movements in exchange rate, although he gets complete protection from unfavourable movements. Participating forward is an arrangement whereby the hedger is able to get protection from unfavourable movements in exchange rate as under a forward contract and also share gains in the favourable movements.

Let us say that an exporter in India has receivable of USD 10 lakhs due 3 months. Three months forward rate for US dollar is Rs. 46.55. If he books a forward contract, he will get Rs. 46.55 per dollar on the due date, irrespective of the spot rate prevailing. If the spot rate on the due date is Rs. 46.40, his notional gain is 15 paise per dollar. If the spot rate is Rs. 46.80, his notional loss is 25 paise per dollar.

Instead of outright forward contract, he can enter into a participating forward under which he gets full protection against dollar depreciating below Rs. 46.55 and also gain, say 40%, in its appreciation above this level. Suppose the spot rate on due date is Rs. 46.40. The entire USD 10 lakhs will be purchased by the bank at Rs. 46.55. If the spot rate is Rs. 46.80, 60% of USD 10 lakhs will be bought by the bank at Rs. 46.55 and the balance 40% at the spot rate of Rs. 46.80. Thus the hedger is able to participate in the favourable movement in rate by 40%.

The mechanism underlying this arrangement is the exporter buying and selling put and call options at the same strike price, but for different amounts. In our example, he will buy put option for USD 10 lakhs at Rs. 46.55. He will sell call option for USD 6 lakhs at the same strike price.

Suppose the spot rate on due date is Rs. 46.40. The exporter will find that it is beneficial for him to exercise his right under the put option he bought with a strike price of Rs. 46.55. Thus he gets Rs. 46.55 per dollar on the entire USD 10 lakhs. The bank which has bought from him call option for USD 6 lakhs will find that the option is out-of-the money and let it expire.

If the spot rate is Rs. 46.80, the exporter will find it not advantageous to exercise his put option and let it expire. The bank will find its call option is in-the-money and buy USD



6 lakhs at Rs. 46.55, the strike price under the option. The balance of USD 4 lakhs will be purchased by the bank at the market rate of USD 46.80.

The participating forward is a cost effective arrangement for the exporter because he receives premium on the call option written by him.

A similar arrangement can be made by a person who has a payable in foreign currency by buying call and selling put for the same strike price and for different amounts.

3. **Range Forwards.** Range forward is similar in structure to participating forward. It involves simultaneous buying and selling of call or put options. For example, if an exporter expects to receive USD 1 million in 6 months' time and decides to receive it as yen and his break even is 105 yen per dollar, he may buy a USD put/yen option of USD 1 = Yen 105. (That is, he can sell dollar to the bank at this rate.) For buying the put option, the exporter pays a premium of say USD 50,000. This is the cost of the option. If the dollar appreciates and on the due date, the rate is USD 1 = Yen 120, he will not exercise the option and prefer to receive the higher value in yen at the spot rate. On the other hand, if the yen appreciates and the rate on the due date is USD 1 = Yen 100, he will exercise the option.

Suppose the exporter wishes to reduce the cost of option and is willing to limit his gains from possible appreciation of dollar. As an exporter he can write (i.e., sell) a USD call/yen option to his bank for USD 1 million, say at a strike price of USD 1 = 110. Under this contract, the bank has the option to buy USD 1 million at the end of the sixth month. The customer can collect premium from the bank offering this option. If the premium received is USD 40,000, the net cost of both the options is USD 10,000 as against the previous cost of USD 50,000. If the option is written at the same premium as that paid on the put option, the cost to the exporter will be zero.

Let us say the exchange rate on the due date is USD 1 = Yen 120. The exporter will not exercise his option. But the bank will exercise its option to buy dollars at Yen 110. The customer will receive Yen 110 million from the bank for the export proceeds. On the other hand, if the exchange rate turns out to be Yen 100, the exporter will exercise his option and require the bank to pay his Yen 105 million against the remittance. It would not be advantageous for the bank to exercise its call option at this price. Thus under the range option, the exporter gets protection from exchange fluctuation in the range of Yen 105-110. He protects himself against dollar falling in value below this range; at the same time, he forgoes the opportunity of gaining from the dollar appreciating beyond this range. Thus, as against a simple option, in a range option, the cost of hedging can be reduced, but the potential of gaining is also limited.

Ratio range forwards is a more flexible variation of the range forwards. It is a combination of simple straightforward option and range forward options. The main difference is that the amounts of the option bought and sold are different. The ratio of the two amounts can be so chosen as to bring down the net payment of premium even to zero.

### Difference between Futures and Options:

Futures and options are two basic types of derivatives. Both can be used as hedging instruments. However, the two differ as follows:



- (i) The futures involve obligation while the options involve right. In futures, the obligation must be fulfilled by both the parties, but in case of options, the option holder has the right to exercise or not to exercise his option. If he decides to exercise his option, the option writer must fulfill his obligation.
- (ii) In the futures, there is no premium payable to buy the futures. However, some margin may be required to be deposited with the exchange. But, in case of options, the option holder has to pay a premium to buy the option. Besides, he may also be required to deposit the margin with the exchange. So, there is relatively an uncertainty in cash flows in futures as compared to options.
- (iii) In futures, the profit or loss of both the parties depend upon the specified price and the actual price on the settlement day. So, both the parties are exposed to unlimited profit or loss. But, in case of options, the loss of the option holder is restricted to the premium paid but his gains are unlimited. Similarly, the profit of the option writer is limited to the premium received, but he is exposed to unlimited risk.
- (iv) Generally, the maturity period of futures is longer than that of the options.

### Some other Options:

**American Options and European Options:** In the American option, the option holder can exercise the right to buy or sell, at anytime before the expiration or on the expiration date. However, in the European option, the right can be exercised only on the expiry date and not before. The possibility of early exercise of right makes the American option to be more valuable than the European option to the option holder. In India, the stock options (i.e., options in individual shares are American options, while the index options, i.e., NIFTY options and Sensex options are European options. The American option has greater profit potentiality than European Option.

For example, the price of PQR Ltd. share is Rs. 80 and one month put option is available at Rs. 76. Midway during the month, the rate comes down to Rs. 74 and on the last date the rate is Rs. 77. In case of American option, the investor can exercise his right and can gain Rs. 2 per share. But in case of European option, he will have to wait till the end, and he will incur a loss of Re. 1 per share.

**Naked Options and Covered Options:** A call option is called a covered option if it is covered/written against the assets owned by the option writer. In case of exercise of the call option by the option holder, the option writer can deliver the asset or the price differential. On the other hand, if the option is not covered by the physical asset, it is known as naked option. In India, all options at the BSE and NSE are cash settled and delivery of shares is allowed even in stock options.

**Stock, Interest and Index Options:** Option may also be classified with reference to the underlying asset. Options on the individual shares are known as stock options or Equity options. In India, SEBI has allowed stock options at NSE as well as on BSE in selected shares. An index option is the option on the index of securities. In India, SEBI has allowed options on NIFTY and Sensex. Besides, there may be interest rate options and currency options. In India, these options are not



popular. It may be noted that the stock options and index options are exchange traded options, whereas the interest rate and currency options are over the counter.

### Special Types of Options:

**Long-term Equity Anticipation Securities (LEAPS):** In general, the options are available for a period upto 6 months. In India, the options on indices as well as on shares are available only upto a period of 3 months. However, in some of the stock exchanges options can be traded for a period upto 3 years. Buying in the money LEAPS can be attractive to investors as an alternative to share purchase, reducing the monetary exposure and still retaining all the appreciation potentials.

LEAPS are not available in India, but are traded on all major stock exchanges in respect of more than 200 shares as well as index options. LEAPS are obviously more expensive than usual options. However, cost per day per share in LEAPS is much lesser than in ordinary options. LEAPS, like short term options, can be used for hedging as well as for speculation.

**Swaptions:** Options on swaps are called swaptions. A swaption is a contract in which a party acquires an option to enter into a swap agreement. The buyer of the swaption has the right to enter into a swap agreement on the pre-determined terms by some specified date in future.

A call swaption is an option that allows the buyer to enter into the interest rate swap where the buyer pays a floating rate and receives a fixed rate, while the writer of call option receives a floating rate and pays a fixed rate. On the other hand, a put swaption is one where the buyer has an option to enter into an interest rate swap in which the buyer pays a fixed interest rate and receives a floating rate, and the writer receives the floating rate and pays the fixed interest rate. The call and put swaptions may also be called as receiver swaption and payer swaption respectively. Like other options, the buyer of the swaption (put or call) pays an option premium to the swaption writer.

A swaption has got a strike rate in terms of fixed interest rate and a maturity date which can be either American or European. Premium on swaptions is paid upfront. The underlying asset of the swaption is the swap. The parties to swaption may agree that it would be exercised by either a simple transaction or the parties would actually enter into the underlying swap.

For example, ABC Ltd. is of the opinion that in two years from now, it would need to enter into an interest rate swap with a notional principal of Rs. 10 crores. It expects that the swap would be a Four-year Pay fixed-Receive float swap. In view of the rising interest rates, the firm considers that it would have to pay higher fixed rate if it enters into the swap at that time (i.e., after two years). So, it may purchase a two-year put swaption (payer swaption) for a four-year pay fixed receive float swap, at a strike rate of interest (say 10%). ABC Ltd. would be required to pay premium for buying this put swaption.

After two years, if ABC Ltd. finds that it should enter into a swap at that time, it can do so by exercising the swaption. The fixed rate interest would be payable only at, say, 10%, otherwise, if swaption was not there, ABC Ltd. would have to pay the market rate of interest which might be more than 10%. In case, ABC Ltd. finds that there is no need to enter into a swap, it may let the swaption lapse after two years.



**Options on Futures:** Option on futures is a special type of option contract. These instruments combine characteristics of options as well as that of futures. The discussion so far in this chapter deals with the option which gives the holder a right to buy or sell a certain quantity of asset at a specific rate on a specific date. It may also be termed as options on spot. Because, in case the option is exercised, the transaction is settled immediately. The other type of option could be to give a right to the holder to buy or sell an asset at a future date. These options are known as options on futures.

An option on futures is a right, and not an obligation, to trade (buy or sell) a futures contract at a certain price by a certain date. For example, a call option on futures gives a right to the holder to enter into a long futures (to buy) contract; and a put option on futures gives a right to the holder to enter into a short futures (to sell) at a specific price. In other words, an option to buy futures is a call while an option to sell futures is a put.

The expiration date of an option on futures contract is on or a few days earlier than the expiration date of the futures contract. The investor who buys an option on futures has to pay a premium upfront to the seller of the option on futures.

If a call option on futures is exercised, the buyer assumes a long position in futures and the writer of the call option assumes a short position in futures. Once the option has been exercised, the investor, buyer or seller can close out (square off) or keep the futures position.

If the buyer of a put option on futures chooses to exercise the option, the investor obtains the short position in futures. Further, the seller of the put option on futures obtains the long position in futures.

A holder of call option on futures will exercise the option when the option is in the money. In other words, the price of the underlying futures contract is greater than the call options strike price. So, writer of the call option on futures, in this case, will pay to the holder a margin equal to the difference between the strike price of the option and the current market price of the futures. In case of put options on futures, the writer of the put option, on the exercise of the option, has to pay the margin equal to the difference by which the strike price exceeds the current market price of the futures.

**Caps, Floors and Collars:** These are certain options whereby one party agrees to compensate the other if the designated interest rate is different from a pre-determined level. These are known as Caps, Collars and Floors. The party that will receive payment of the reference rate if different from the pre-determined level is called the buyer, and the party that agrees to make the payment is known as the seller.

An interest rate cap is an option in respect of maximum interest rate on borrowing. For example, a company has a plan to borrow in future and expects that present interest rate structure may increase by the time the funds are borrowed. The company may buy an interest rate cap (option) from a bank which will fix the maximum rate of interest. The bank will reimburse the company if the market rates rise above the cap rate. So, the company can fix its interest rate liability by buying an interest rate cap.

An interest rate floor is an option in which the minimum interest rate is fixed. If a company sells an interest rate floor, it will get a premium in return of which it agrees to pay the buyer a



minimum (floor) interest rate. An interest floor is a put option on interest rates. It is written by the borrower of floating rate bonds.

An interest rate collar is a situation when a borrower buys an interest rate cap and at the same time sells an interest rate floor. So, a collar is a combination of cap and floor. The position of caps, floors and collars has been shown in Figure.

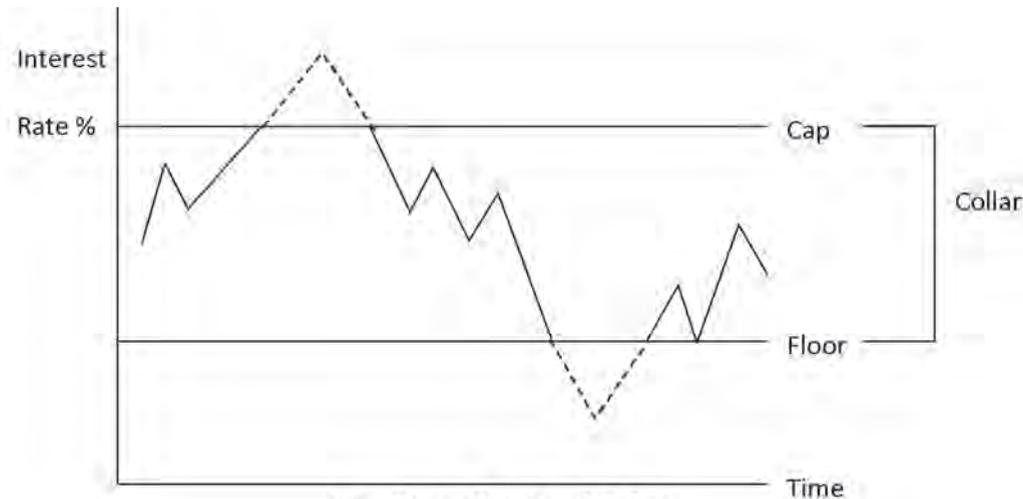


Fig. : Caps, Floors and Collar

In a cap or floor, the buyer pays a premium which is the maximum loss of the buyer and the maximum gain of the seller. The buyer of the cap benefits if the reference rate rises above the strike rate because the seller compensates the buyer. The buyer of a floor benefits if the reference rate falls below the strike rate because the seller must compensate the buyer for the difference.

In case of caps and collars, the pay off is the same as in case of option. A cap has a pay off which is just same as that of buying call option and a floor has a pay off which is just same as that of a selling put option.

### Pricing and Valuation of Options:

The valuation of shares, both equity and preference, bonds and debentures is found in terms of the series of inflows and outflows, required rate of return and the time pattern of inflows and outflows. However, the same technique and procedure cannot be applied for valuation of options. The reason being that the options have characteristics and features that make them different from the securities. The valuation of an option depends upon six factors relating to the underlying asset and the financial market. These factors are:

- (i) **Current Value of the Underlying Asset.** As the options, being financial derivatives, derive their value from the underlying asset, the current value of the underlying asset is an important factor for valuation of options.
- (ii) **Expected Volatility in the Value of the Underlying Asset.** Any expected change in the value of the underlying asset also affects the value of the option on that asset. In a call option (where the holder has a right to buy the asset), an increase in the value of the asset



will increase the value of the call option. Similarly, if the value of the asset is expected to increase in case of put option, the value of the put option will decrease. So, the value of option depends upon the variation in the value of the asset. The higher the variations in the value of the underlying assets, the greater the value of the option.

- (iii) **Strike Price of the Option.** The exercise of the option depends upon the difference between the strike price and the actual price of the underlying asset; therefore, the strike price is an important factor for valuation of options. In case of call option, the value of option will decline as the strike price increases, and in case of put option, the value of the option will increase as the strike price increases.
- (iv) **Expiration Time of Option.** The longer the time to expiry, higher would be the value of the option. The simple reason being that longer expiry time will allow more time for the underlying asset to move. In terms of time value of money, the present value of the strike price will decrease as the expiry time of the option increases. For example, in case of put option, the present value of the expected proceeds from the sale of the underlying asset at the strike price, decreases as the expiry time of the option increases.
- (v) **Rate of Interest.** The option holder has to pay the option premium upfront, i.e., in advance to buy the option. So, there is always an opportunity cost of this premium. This opportunity cost depends upon the time to expiry and prevailing interest rates. Increase in interest rate will increase the value of the call option but will reduce the value of the put option.
- (vi) **Income from Underlying Asset.** During the life of the option, there may arise interest or dividend income on the underlying assets. The value of the asset will decrease, as the interest or dividend is paid. So, the value of the call option decreases and the value of the put option increases as more and more interest and dividends are paid on the underlying assets.

**Table: Effect of Different Factors on the Valuation of Options**

Factor	Call Option Value	Put Option Value
1. Increase in value of Underlying Asset	Increases	Decreases
2. Extent of Volatility in Value of Asset	Increases	Increases
3. Increase in Strike Price	Decreases	Increases
4. Longer Expiration Time	Increases	Increases
5. Increase in Rate of Interest	Increases	Decreases
6. Increase in Income from Asset	Decreases	Increases

**Value of an Option:** An option is an instrument with limited liability, i.e., the premium. A holder will exercise the option only when it is beneficial to him. An option cannot have a negative value because the option holder cannot be compelled to exercise it. This is applicable to both call and put options. The option price is consisting of two components: the intrinsic value and the time value.

**Intrinsic Value of an Option:** It is also known as minimum value of an option. It denotes the economic value of the option if it is exercised immediately. The intrinsic value of an option is non-negative. The value of the option which the option holder has (i.e., value of the choice to exercise the option or not) very much depend upon the interplay of the strike price and the market value of the underlying asset.



This can be further substantiated as follows:

In case of a Call Option, the option value is equal to the excess of market price over the strike price. The call is said to be in the money and the difference is called the intrinsic value of the option. However, if the market price of the asset is less than the strike price, the difference between the two is negative and the call is said to be out of money. In this case, the intrinsic value of the call is zero, and the option value, if any, may be based on the speculative motive only. An option for which the strike price is equal to the current price, is said to be at the money.

In case of Put Option, the situation is reverse. The put option is said to be in the money when the market value is less than the strike price. The difference between the two is negative and is called the intrinsic value of the put option. In the other case, when the market value of the asset is more than the strike price, the put option is said to be out of money and the intrinsic value of the option is zero.

It may be noted that the value of an option usually does not fall below the intrinsic value. This in fact is ensured by the presence of arbitrageurs. Option price will generally be higher than the intrinsic value.

For example, the current market price of a share is Rs. 250 and the strike price is Rs. 220 for a call option, the intrinsic value of the call option is Rs. 30. In this case, the option holder would exercise the option and sell the share immediately in the market for Rs. 250 and thereby making a profit of Rs. 30. Similarly, the strike price for a put option is Rs. 265. The value of the put option is Rs. 15. The put option holder will buy one share from the market for Rs. 250 and exercise the option to sell it at Rs. 265 and thereby making profit of Rs. 15.

**Time Value of Option:** The time value or the time premium of an option is the amount by which the option price exceeds the intrinsic value. The option holder hopes that change in market price of the underlying asset will increase the value of the option (right) before the expiration date. For this expectation, the option buyer is ready to pay a premium above the intrinsic value. On the expiration date, the time value of option is zero and the premium is entirely represented by the intrinsic value. If there is at the money position, it means there is no intrinsic value and the entire premium is represented by the time value.

$$\text{Time Value of Option} = \text{Option Price} - \text{Intrinsic Value.}$$

For example, the current market price is Rs. 105 and the strike price is Rs. 100 for which the call option premium is Rs. 9. This premium of Rs. 9 is consisting of Rs. 5 as the intrinsic value and balance Rs. 4 as the time value. In the same case, if the current price is, say, Rs. 95, then there is no intrinsic value. The entire option premium of Rs. 9 is time value.

## Valuation Models:

The discussion on options so far has presented qualitative model for valuation of options. The qualitative approach can be replaced by precise mathematical models for valuation of options. Valuation model based on the Discounted Cash Flow Technique (DCF) can be used to value the Bonds and Shares.

The DCF requires



- Estimation of future cash flows, and
- A suitable discount rate representing the inherent risk of the security.

The valuation of a security is derived by discounting the future cash flows of the asset. Can this DCF be used to value the options? Certainly not. There are problems in applying the DCF for valuation of options.

The problems arise because

- It is very difficult to estimate the future cash flows of an option, and
- The appropriate discount rate cannot be determined, because the risk of option cannot be determined.

The option is a derivative security and its risk depends upon the movement in prices of the underlying security. An option is riskier than the underlying asset, but it is difficult to estimate exactly how much riskier. So, the options cannot be valued by applying the DCF.

### **Binomial Model for Option Valuation (BM):**

The BM is based on a simple formulation for the asset price process in which the asset, in any time period, can move to one of the two possible prices. The BM can be presented in terms of the following assumptions:

- (i) The current price of the share is  $S$  and it can take two possible values after 1 year,  $S_1$  or  $S_2$  such that  $S_1 > S > S_2$ .
- (ii) The investor can borrow or lend an amount  $B$  at a rate of interest ' $r$ '.
- (iii) The strike price,  $K$ , is given.

The BM is based on the concept of Replicating Portfolio which refers to a portfolio consisting of the underlying asset and a riskless asset, which generates the same cash flow as a specified call/put option. The objective in using a Replicating Portfolio is to use a combination of risk free borrowing/lending and the underlying asset to create the same cash flows as the option being valued would create. The principle of arbitrage applies here and the value of the option must be equal to the value of the replicating portfolio. As the share price can move upto  $S_1$  or can go down upto  $S_2$  in one time period, the replicating portfolio for a call option with strike price  $K$ , involves borrowing an amount  $B$  and acquiring  $\Delta$  number of units of the underlying asset such that

$$\begin{aligned}\Delta &= \text{Number of units of underlying asset} \\ &= (C_1 - C_2) \div (S_1 - S_2) \\ &= \frac{\text{Difference in Option Values}}{\text{Difference in Share Values}}\end{aligned}$$

Where  $C_1$  = Value of the call option if the share price is  $S_1$ .

$C_2$  = Value of the call option if the share price is  $S_2$ .

The key insight of the BM is that the pay off structure of a particular call option contract at the



expiration can be replicated by a carefully constructed portfolio composed of a specific number of shares and a certain amount of one period debt.

### Generalisation of the Binomial Model:

The call value under the BM can be found as per Equation

$$C = \left[ \frac{1+r-d}{u-d} \right] \left[ \frac{C_1}{1+r} \right] + \left[ \frac{u-1-r}{u-d} \right] \left[ \frac{C_2}{1+r} \right]$$

Where  $u = 1 + \% \text{ change in asset price if prices go up, i.e., } S_1 \div S$

$d = 1 + \% \text{ change in asset price if prices go down, i.e., } S_2 \div S$  and other notations remaining as used earlier.

#### Example:

The current market price of an asset is Rs. 80( $S$ ). In one year's time from now, the price may be Rs. 100 ( $S_1$ ) or Rs. 70 ( $S_2$ ). A call option at the strike price of Rs. 80 is available for Rs. 20. However, call option price would be zero if the market price turns out to be Rs. 70. The riskfree rate of interest for the one period till expiration of call option is 10%. Find out the fair value of the call option as per BM.

#### Solution:

In the given case, values of variables required for BM are:

$$C_1 = \text{Rs. 20}$$

$$C_2 = 0$$

$$S = \text{Rs. 80}$$

$$S_1 = \text{Rs. 100}$$

$$S_2 = \text{Rs. 70}$$

$$r = 0.10$$

$$\text{Now, } u = S_1 \div S = 100/80 = 1.25$$

$$d = S_2 \div S = 70/80 = 0.875$$

Fair value of call option as per BM, using Equation is:

$$\begin{aligned} C &= \left[ \frac{1+r-d}{u-d} \right] \left[ \frac{C_1}{1+r} \right] + \left[ \frac{u-1-r}{u-d} \right] \left[ \frac{C_2}{1+r} \right] \\ &= \left[ \frac{1+0.10-0.875}{1.25-0.875} \right] \left[ \frac{20}{1+0.10} \right] + \left[ \frac{1.25-1-0.10}{1.25-0.875} \right] \left[ \frac{0}{1+0.10} \right] \\ &= \text{Rs. 10.90} \end{aligned}$$



## Black & Scholes Model (BSM):

In 1973, Black and Scholes presented a model which, since then, has been regarded as the basic option valuation model. The BSM presents that a combination of shares and borrowing can indeed duplicate call option over an infinite time horizon. As the share prices will change over the first instant, another combination of share and borrowing is required to duplicate the call option over the second instant, and so on. The investors can continually duplicate the call options by adjusting the combinations from moment to moment. It appears to be too complicated yet BSM attempts to value the option based on continuously duplicating strategy.

Regarded as an important breakthrough in the theory of finance, the BSM computes the fair value of a call option on a share as a complex but exact function of the five variables:

- (i) Current value of the share,
- (ii) The Strike price,
- (iii) Time to expiry,
- (iv) The Interest rate, and
- (v) Volatility of the price of the underlying asset.

The model provides a perfectly hedged investment strategy by accumulating riskless profits by exploiting the options mispricing. Though the BSM basically deals with the valuation of call options yet it may also be used to value the warrant (which is also a call option). The model is based on the following assumptions:

- (i) The call option is the European option i.e., it cannot be exercised before the specified date.
- (ii) The underlying shares do not pay any dividend during the option period.
- (iii) There are no taxes and transaction costs.
- (iv) Share prices move randomly in continuous time.
- (v) The short-term risk free rate is known and is constant during option period.
- (vi) The short selling in shares is permitted without penalty.

On the basis of these assumptions, the BSM can be presented as follows:

$$\text{Value of a call option} = SN(d_1) - Ke^{-rt} N(d_2)$$

where,  $S$  = Current market price of the underlying shares

$K$  = Strike price of the option

$t$  = Remaining life to expiration of the option

$r$  = The annual risk free rate

$e$  = Base of natural logarithms

$N(d_1)$  = Normal distribution function of  $d_1$



$$= \frac{\ln(S/K) + (r + 0.5\sigma^2)t}{\sigma\sqrt{t}}$$

$$N(d_2) = d_1 - \sigma\sqrt{t}$$

$\sigma$  = Standard deviation of continuously compounded return of the asset

= Standard deviation in the ln (natural log) of the share prices.

ln = Natural Log, i.e., log to the base e.

### Example:

The share of X Ltd. is currently sold for Rs. 60. There is a call option available at strike price Rs. 50 for a period of 6 months. Find out the value of the call option given that the rate of interest of the investor is 14% and the standard deviation of the return of the share is 30%. Use Black and Scholes Model.

In order to apply the BSM, the values of  $d_1$  and  $d_2$  are to be calculated first, as follows:

### Solution:

$$\begin{aligned} d_1 &= \frac{\ln(S/K) + (r + 0.5\sigma^2)t}{\sigma\sqrt{t}} \\ &= \frac{\ln(60/50) + [0.14 + 0.5(0.30)^2]0.5}{0.3\sqrt{0.5}} \\ &= \frac{\ln(1.0714) + (0.0925)}{0.2121} \\ &= \frac{0.0686 + 0.0925}{0.2121} = 0.760 \end{aligned}$$

$$d_2 = d_1 - \sigma\sqrt{t} = 0.760 - 0.3\sqrt{0.5} = 0.548$$

Now,  $N(d_1)$  and  $N(d_2)$  may be calculated. The values  $N(d_1)$  and  $N(d_2)$  represent the cumulative probabilities that the standard normal variable will assume for values less than  $d_1$  and  $d_2$  respectively. Using statistical terminology, the cumulative probability of 0 is 50% or  $N(0) = 0.50$ . The cumulative probabilities for different values of  $d_1$  and  $d_2$  can be found with the help of Area under Normal Curve Table.

$$\text{Now } N(d_1) = N(0.760) = 0.500 + 0.2764 = 0.7764$$

$$N(d_2) = N(0.548) = 0.500 + 0.2070 = 0.7070$$

The value of the call option can be calculated with the help of above equation as follows:

$$\begin{aligned} \text{Value} &= SN(d_1) - Ke^{-rt} N(d_2) \\ &= 60(0.7764) - 56 \times e^{-0.07 \times 0.7070} \\ &= 60(0.7764) - 56 \times 0.9324 \times 0.7070 \\ &= 46.58 - 36.92 = \text{Rs. } 9.66 \end{aligned}$$



In the above example, the value of  $t$  has been taken as six months or 0.5; the value of  $r$  is given as 0.14, so ' $rt$ ' is  $0.5 \times 0.14 = 0.07$ . Now, for the value of  $e^{-0.07}$ , the Poisson distribution table may be referred to. The value of  $e^{-0.07}$  in this table is 0.9324. This value can also be calculated with the help of a scientific calculator.

### BSM: Steps

1. Find out the value of  $t$  in terms of years. For example, for a call option of 6 months,  $t = 0.5$ ; for a call option of 73 days,  $t = 73 \div 365 = 0.2$ , and so on.
2. Find the value of ' $rt$ ' by multiplying the rate of interest with the  $t$ .
3. Find out values of  $N(d_1)$  and  $N(d_2)$  with the help of Area under Normal Curve table.
4. Find out the value of a call by using Equation

### Solution:

The calculation of the value of  $d$ , requires, natural log of  $S/K$ . In case, the natural log table is not available, the normal log table (base 10) can be used as follows Suppose,  $\ln$  of number ' $m$ ' is to be found. This can be written as:

$$\ln 'm' = \frac{\log m}{\log e}$$

$$\log e = \log 2.7183 = 0.4343$$

$$\text{So, } \ln 'm' = \frac{\log m}{0.4343}$$

Say, the  $\ln$  of 2.5 is to be found. This can be written as:

$$\ln 2.5 = \frac{\log 2.5}{0.4343} = \frac{0.3979}{0.4343} = 0.9162.$$

So, the  $\ln 2.5$  (Natural log of 2.5) is .9162.



## PART - D

### Major Content of Part D:

- Asset-Liability Management

### **Asset-Liability Management:**

One of the functions of investment portfolio is to meet the liquidity requirements. Efficient asset liability strategy informs the level of liquidity requirements expected from investment department on constant basis. The study conducted reveals that a non-formal asset-liability management system has been established by the banks so far. For effective asset-liability management assumptions about future rates of interest and forecasts of source and uses of funds must be available. The forecasts must be analysed to explore the implications of the next month, quarter, year and beyond for planning and control.

The key aspects of asset-liability management include managing of liquidity, building capital adequacy, analysing interest sensitivity and maintaining appropriate interest margin which is the primary source of income to a bank. Except in case of one bank, the other banks are not taking into consideration these aspects in a systematic way.

### **Liquidity Risk Management through Asset-Liability Management:**

It is difficult to measure liquidity risk as it entails expecting likely inflow of deposits, loan dispersals, changes in competitive environment, etc. The most commonly used techniques for measurement of liquidity risks is the gap analysis. The assets and liabilities are arranged according to their maturity pattern in time brackets. The gap is the difference between the maturing assets to the maturing liabilities. A positive gap indicates that maturities of assets are higher than those of liabilities. A negative gap indicates that some rearrangement of funds will have to be done during that time bracket. It can be from sale of assets or issue of new liabilities or rolling over existing liabilities.

### **Exchange Rate Risk Management through Asset-Liability Management:**

At a particular exchange rate assets and liabilities of a financial institution match exactly. As the exchange rate fluctuates this balance gets disturbed. A simple solution to correct this risk Risk Management and Shareholders is to match assets and liabilities of the same currency. Many financial institutions do not have foreign exchange exposure as all their assets and liabilities are in rupee currency. The risk of foreign exchange borrowings of these institutions are passed on to the lenders through dollar denominator loans. The uncovered loans are hedged at the time of contracting them through forward covers for the entire amount.

Risk management is sometimes thought of incorrectly as a method for reducing or eliminating risk. This view is too restrictive, because risk is an unavoidable part of life. The fact that people



don't approach risk in the same way makes managing risk in organisations a challenge. The process follows similar principles, but it is more complicated, of course.

Any corporate activity involves risk and according as the risk involved in the corporate activity return needs to be computed for the investment made. Normally, an individual is risk averse and prefers liquidity to the extent of scheduled commitments. Always the individual keeps his money safely at a place where it is risk free, say a scheduled bank. He gets a return for keeping the money in a bank and that interest rate is "risk free rate". The incentive to invest this money in an activity involving risk could be to get a higher return for the increased risk. This is known as "risk premium".

One complication is that organisations are collectives of people with different views of the conditions, different experiences and different attitudes to risk. For example, accountants are seen (stereotypically) as risk-averse, while sales people are seen as more risk-orientated. Another complication is that organisational objectives are far more complex than those of individuals, because organisations are trying to satisfy a range of stakeholders, whose attitudes may also vary. Organisations are expected to produce continuously improving results and set stretching objectives to satisfy their stakeholders. Risk, therefore, is not only about the possibility that something bad will occur; it's also about missed opportunities – goals that can't be achieved. In order to meet its objectives a business must take risks, such as introducing a new product, and there is usually a trade-off between risk and return. Investing in government securities is a safe option, for example, but the returns will be low. Introducing a new product, on the other hand, may pay much higher returns but there's a risk that the product may not be successful. There are different organisational risk management models, but the following process contains seven key steps:

- **Identify the risks.** Risks are an everyday part of life, so organisations need a system to identify all those they face. This involves collecting information from a variety of sources: individuals, reports, observation and environmental assessments. Common methods of collecting data that identify risks include workshops, scenarios, brainstorming and surveys. These may be linked with consultations with stakeholders, environmental analyses, strategic plans etc.
- **Assess their impact.** Once the risks have been identified, some assessment needs to be made of their likely impact. This involves quantifying the risk in some way. We might conduct market surveys, computer simulations, cost-benefit analyses use a Delphi technique or apply probabilities, statistical tests or sensitivity analysis. Alternatively, we may rely on subjective judgments.
- **Map the risks.** This involves prioritising the most critical risks by mapping the probability of each risk eventuating against the consequences of its eventuation. Organisations may use a simple high-medium-low scale for both likelihood and consequences, or they may use a more complex scale. Whichever one they use, prioritisation is important because organisations typically face hundreds or even thousands of risks, and only the most significant ones can be managed.
- **Record risks in a register.** The risk register lists the risks that have been identified, together with the likelihood and consequences of the occurrence of each one. This is a comprehensive



register that ensures that risks are constantly evaluated. But mapping ensures that the biggest risks get the most attention. Risks are often grouped into categories in the register to make many related risks more manageable.

- **Evaluate the risks against the organisation's appetite for taking them.** This must ultimately be the board's call. It's a question of setting the parameters for whether particular risks should be accepted, rejected or managed in some way.
- **Treat the risks.** This involves decisions on whether particular risks should be avoided, reduced, transferred or accepted. Avoidance involves withdrawing from high-risk activities. Reduction involves mitigating either the likelihood or the impact of a risk by introducing internal control mechanisms. Transferral can occur through methods such as outsourcing, insurance or hedging, while acceptance implies that no action is necessary. The panel above shows the prioritisation of risks and appropriate responses to them using the likelihood/ consequences (or impact/probability) matrix.
- **Report the risks.** This informs the whole organisation about the risks it faces and its responses to them, explaining how they are identified, assessed and managed. Only the biggest risks, in terms of their likelihood and consequences, need to be reported. Risk reports should show both the gross risk (before controls are introduced) and the net risk (after the effect of controls is taken into account) to demonstrate the cost-effectiveness of those controls.

A question that often emerges is whether organisational risk management is a bottom-up or top-down process. In practice, it is both. Business units and departments must identify and assess risks facing them at local level. The top management team will see more strategic risks as a result of changing economic, competitive or regulatory conditions. Both processes need to be combined to ensure that risks are identified and assessed throughout the organisation.

Best practice suggests that a risk management group (RMG) should be established to perform this seven-step process.

The RMG should report formally to the board, usually through the audit committee or a separate risk committee. The group's recommendations will influence the internal controls that the organisation implements. The RMG should also monitor the effectiveness of the whole risk management process, making improvements as necessary. Together with internal and external audit, the risk management process ought to provide a high level of assurance to the board that an effective system for risk management and control exists.

The RMG operates at corporate level but can also advise individual business units and departments on their risk management practices. The seven-step process also takes place in business units and departments, where operational risks are identified, assessed, mapped and recorded on a register.

While an organisation's appetite for taking risks and its responses to them will generally be established by the board, a portfolio approach may result in differing appetites in different business units or departments, because the risk/return trade-off often varies in separate parts of an organisation. For example, a marketing department may be able to take risks in new promotions while an HR department will be risk-averse for fear of the problems caused by



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poor employment practices. It is important that risks identified at each level are communicated up and down the organisation. This is an important function of the RMG.

So risk management at individual level has a great deal in common with how it's done at organisational level. The seven steps process is a good way to think about how organisations deal with the risks that they face.



## PART - E

### Major Contents of Part E:

- Project Risk Management
- Enterprise Risk Management

### Project Risk Management:

It is the normal bank practice to include a short summary of project risks in each appraisal report. The purpose of this chart is to provide a summary of project risks in order to help ensure uniformity and consistency in appraisal reports.

The project-specific risk for an individual investment project occurs because the cash flows from the project might be higher or lower than expected, for reasons that are specific to the project. The cash flows might have been estimated incorrectly, such as an under-estimate of operating costs or an over-estimate of market demand. (However, if a company invests in a wide range of similar projects, it can be argued that much of this project risk will be diversified away in the normal course of business.) Other risk factors specific to a project could be the location of the project, or the quality of personnel, or the reliability of the equipment to be used.

### Competitive risk:

This is the possibility of unexpected effects on the project cash flows (positive or negative), due to the actions of competitors. The actual actions of competitors might differ from the assumptions made by the company when it takes its project investment decision. Companies cannot diversify away competitive risk, but shareholders can, by investing in the shares of the competitor companies.

### Industry-specific risk:

This is the risk of unexpected changes to a project's cash flows (positive or negative) from events or changing circumstances in the industry in which the investment is made. Unexpected changes can arise, for example, due to new technology, or a change in the law or a rise or fall in the price of a key commodity.

### Projects with Quantified Benefits:

The economic internal rate of return (EIRR) is the measure most often used to indicate the economic viability of Bank financed projects. Calculation of the EIRR requires a set of assumptions regarding the conditions faced by the project which in the judgement of the appraisal mission are most likely to prevail during its life. However, since Bank financed projects normally have a very long life, the conditions faced by the project may change for a variety of reasons. Sensitivity analysis is, therefore, carried out to determine the effects of possible changes in the values of key variables (costs, yields, and price of inputs and outputs) on the project's EIRR.



The number of risks facing a project could be large, and it is neither possible nor desirable to identify all possible risks associated with a project. The risks discussed in the appraisal report should essentially be those which entail major economic consequences. These should be identified from the sensitivity analysis and described in descending order of importance with regard to their impact on the EIRR.

Particular attention should be paid to risks that would substantially reduce the project's EIRR or render the project uneconomic by reducing its EIRR below the opportunity cost of capital. In this context, both the base-case EIRR and the sensitivity indicators are relevant. If the base-case EIRR is high, the discussion of project risks should generally include risks to which the project is highly sensitive. For example, the EIRR of most projects is highly sensitive to changes in project output, which may in turn depend on a number of factors. A discussion of the safeguards employed to minimise the risk of the outputs falling substantially below the level expected should therefore be included. For example, in an irrigation project, apart from the availability of water, output may depend on the supply of other inputs, provision of extension services, effectiveness of water management by farmers' groups, and availability of adequate infrastructure and storage facilities. Measures taken to ensure adequate and timely availability of each should be briefly explained.

In road projects, the major risk may be confined largely to securing a right-of-way. Failure to obtain it may not only increase project cost, but may delay or reduce the project benefits. Thus the mission should specify the measures taken or proposed for minimising these risks. Mention should also be made of the relevant assurances obtained from the government of executing agency.

Risks are obviously greater in projects for which the base-case EIRR is only marginally higher than the opportunity cost of capital. These larger risks are even greater if the EIRR is highly sensitive to changes in key variables since even a small reduction in the EIRR would render the project unviable. Even when the EIRR is relatively insensitive to changes in key variables, combinations of adverse changes might easily affect the project's viability. Thus, in such cases, the remedial actions proposed or adopted should be fully explained.

Many projects provide for establishing project management office and for recruiting consultants to ensure smooth project implementation. While these arrangements should be discussed in the appropriate sections of the appraisal report, they should be summarized under the discussion of project risks if the EIRR is relatively sensitive to delays in project implementation, and especially if such a delay would adversely affect project viability.

If the project output is traded internationally, one risk may be future changes in the price of the output, particularly if the share of a project or the country's output is small relative to the world market. In such cases, a review of world demand and supply forecasts for the good in question should be included.

By their very nature, certain types of projects such as a gas and oil exploration involve very high risks. For such projects, it is necessary to supplement the sensitivity analysis with a probability analysis. The latter provides a range of possible outcomes in terms of a probability distribution and based on that project related decisions could be made more intelligently. But the analysis is more complex and requires more information about events affecting the project. Due to the



considerable work involved, probability analysis of risks is usually undertaken only for project carrying a high degree of risk or for large projects where miscalculations could lead to a major loss to the economy. For such projects, the nature of the risks involved and the measures taken or recommended to minimise the risks, together with the results of the analyses, should be discussed in the appraisal report.

**Projects for which Benefits are not quantifiable:** For projects in certain sectors or sub-sectors such as education, health, sanitation and family planning, project benefits cannot be quantified and the risks cannot be measured by sensitivity analysis. In such cases, the relationship of project risks to the project's objectives should be explained. The eventualities that might impede the realisation of the objectives should be discussed in relation to the project cost and output, and also in relation to the socio-economic objectives sought by the project.

As in the case of projects for which benefits can be quantified, the risks relating to both the costs and benefits of the project should be discussed. In projects of this type, investment costs primarily relate to instruction of buildings and provision of equipment and supplies. The risks on the cost side thus relate to factors which could delay project implementation. These may include timely provision of local currency funds, the implementation capacity of the project authority and the availability of land.

In such projects, the risks are greater on the benefit side than on the cost side. For instance, in education projects, school buildings and equipment are provided to help achieve a prescribed annual output of graduates with a certain skill level. However, provision of the facilities alone may not ensure achievement of the project objectives. Their achievement may depend more upon the availability of trained teachers, provision of sufficient funds for the recurring expenditures of the institutions, curriculum and admission standards, and motivation of the students.

While it is not possible to eliminate all such risks, it is essential to minimise them. Major risks of this type should be identified and explained along with the remedial measures proposed in the section in which project risks are discussed.

The real benefits of this type of project relate to broad socio-economic goals. For education projects, these may include increased income level for the trainees and a higher level of industrial and agricultural productivity. For family planning projects, the broad goals may be an increased number of acceptors and a consequent reduction in the rate of population growth. The success of such projects thus depends not merely on the facilities provided, but also on the continued favourable conditions assumed by the appraisal mission. For such projects, the assumptions made regarding the relationship between the facilities provided and project's long-term objectives should be clearly explained. The conditions or facilities necessary but external to the project should also be identified, together with relevant assurances received from the government. For projects such as these, this is one of the most important aspects to be discussed in the section dealing with project risks.

## Conclusion:

As the problems and risks facing each project are unique, it is not possible to prescribe a standard format. The selection of project risks to be presented must thus be based on the



appraisal mission's judgement. Nevertheless, the discussion of the project risks in the appraisal report should be concise, and should normally not exceed two or three paragraphs.

### **Enterprise Risk Management:**

While many organisations are now much more cautious about the risks they take, they are also more fervent in their desire to identify and understand the many types of risk they face. Much greater interest in enterprise risk management (ERM) is emerging, as it promises a much broader and comprehensive view of the risk landscape and, therefore, enables better decision-making.

Risk management is an increasingly important business driver and stakeholders have become much more concerned about risk. Risk may be a driver of strategic decisions, it may be a cause of uncertainty in the organisation or it may simply be embedded in the activities of the organisation. An enterprise-wide approach to risk management enables an organisation to consider the potential impact of all types of risks on all processes, activities, stakeholders, products and services. Implementing a comprehensive approach will result in an organisation benefiting from what is often referred to as the 'upside of risk'. There are a number of factors that should be considered when designing and planning an ERM initiative. Details of the risk architecture, strategy and protocols should be recorded in a risk management policy for the organisation. A successful enterprise risk management (ERM) initiative can affect the likelihood and consequences of risks materialising, as well as deliver benefits related to better informed strategic decisions, successful delivery of change and increased operational efficiency. Other benefits include reduced cost of capital, more accurate financial reporting, competitive advantage, improved perception of the organisation, better marketplace presence and, in the case of public service organisations, enhanced political and community support.

The points below provide information on the contents of a typical risk management policy.

### **Contents of Risk Management Policy:**

A risk management policy should include the following sections:

- Risk management and internal control objectives (governance)
- Statement of the attitude of the organisation to risk (risk strategy)
- Description of the risk aware culture or control environment
- Level and nature of risk that is acceptable (risk appetite)
- Risk management organisation and arrangements (risk architecture)
- Details of procedures for risk recognition and ranking (risk assessment)
- List of documentation for analysing and reporting risk (risk protocols)
- Risk mitigation requirements and control mechanisms (risk response)
- Allocation of risk management roles and responsibilities
- Risk management training topics and priorities



- Criteria for monitoring and benchmarking of risks
- Allocation of appropriate resources to risk management
- Risk activities and risk priorities for the coming year

Many organisations issue an updated version of their risk management policy each year. This ensures that the overall risk management approach is in line with current best practice.

It also gives the organisation the opportunity to focus on the intended benefits for the coming year, identify the risk priorities and ensure that appropriate attention is paid to emerging risks. The policy should also describe the risk architecture of the organisation.

Mandate and commitment from the Board is critically important and it needs to be continuous and high-profile. Unless this mandate and commitment are forthcoming, the risk management initiative will be unsuccessful. Keeping the risk management policy up to date demonstrates that risk management is a dynamic activity fully supported by the Board.

In order to be successful, the ERM initiative needs to be comprehensive. However, introducing enhanced standards of risk management is a progressive process that cannot be achieved instantaneously. Therefore, it is necessary for an organisation to decide the scope of the ERM initiative, as it develops. The scope of the initiative will be defined by the range of benefits the organisation is seeking to achieve and this will be influenced by the expectations of the various stakeholders in the organisation.

Risk assessment is a fundamentally important part of the risk management process. In order to achieve a comprehensive risk management approach, an organisation needs to undertake suitable and sufficient risk assessments. Establish risk assessment procedures Risk assessment will be required as part of the decision-making processes intended to exploit business opportunities. One way of ensuring that risk is part of business decision-making is to ensure that a risk assessment is attached to all strategy papers presented to the Board. Likewise, risk assessment of all proposed projects should be undertaken and further risk assessments should be undertaken throughout the project.

Finally, risk assessments are also required in relation to routine operations.

Other considerations relevant to undertaking risk assessments include decisions on how the risk assessments will be recorded. It is at this stage that an organisation will decide the level of detail that will be recorded about each risk in the risk description. Another important part of the risk assessment procedures will be the identification of the risk classification system to be used by the organisation.

An organisation should develop benchmarks to determine the significance (or materiality) of the identified risks. The nature of these benchmark tests will depend on the type of risk. For financial risks, a sum of money can be used as the benchmark test of significance. For risks that can cause disruption to operations, the length of disruption may be a suitable test. Reputational risks can be benchmarked in terms of the profile that the report of the event would receive, the likely impact of the event on share price, or the impact on the political and financial support received from key stakeholders.



### Risk assessment techniques:

Technique	Brief description
➤ Questionnaires and checklists	Use of structured questionnaires and checklists to collect information to assist with the recognition of the significant risks.
➤ Workshops and brainstorming	Collection and sharing of ideas and discussion of the events that could impact the objectives, stakeholder expectations or key dependencies.
➤ Inspections and audits	Physical inspections of premises and activities and audits of compliance with established systems and procedures.
➤ Flowcharts and dependency analysis	Analysis of processes and operations within the organisation to identify critical components that are key to success.
➤ HAZOP and FMEA approaches	Hazard and Operability studies and Failure Modes Effects Analysis are quantitative technical failure analysis techniques.
➤ SWOT and PESTLE analyses	Strengths Weaknesses Opportunities Threats (SWOT) and Political Economic Social Technological Legal Environmental (PESTLE) analyses offer structured approaches to risk recognition.

Having identified suitable risk assessment procedures and decided the benchmark test of significance for different classes of risks, it will then be possible to identify the appetite or attitude to that type of risk, together with the capacity of the organisation to withstand that risk. Finally, the organisation can determine the overall exposure to the particular type of risk under consideration.

Internal and external factors can give rise to risks. FIRM Risk Scorecard risk classification system provides examples of internal and external key risk drivers. Some risk classification systems have strategic risk as a separate category. However, the FIRM Risk Scorecard approach suggests that strategic (as well as tactical and operational) risks should be identified.

It is important that the Board sets rules for risk taking in respect of all types of risk, and some organisations have produced a risk appetite statement that is applicable to all classes of risk. It is fairly easy for an organisation to confirm that it has no appetite for causing injury and ill health. In practice, however, this may need to be developed into a set of targets for health and safety performance. There is a danger that risk appetite statements fail to be dynamic, and they can constrain behaviour and rapid response.

At Board level, risk appetite is a driver of strategic risk decisions. At executive level, risk appetite translates into a set of procedures to ensure that risk receives adequate attention when making tactical decisions. At operational level, risk appetite dictates operational constraints for routine activities.

It is frequently the case that risk assessments are recorded in a risk register. There is no standard format for a risk register and the organisation should establish a suitable format for this important document. The risk register should not become a static record of the significant



risks faced by the organisation. It should be viewed as a risk action plan that includes details of the current controls and details of any further actions that are planned.

These further actions should be written as auditable actions that must be completed within a defined timescale by identified individuals. This will enable the internal audit function to monitor the existing controls and monitor the implementation of any necessary additional controls. The resources required to implement the risk management policy should be clearly established at each level of management and within each business unit. Risk management should be embedded within the strategic planning and budget processes.

As well as monitoring the effectiveness of the existing controls and the implementation of additional controls, the cost-effectiveness of the existing controls should also be monitored.

Additionally, monitoring and measuring includes evaluation of the risk aware culture and the risk management framework, and assessment of the extent to which risk management tasks are aligned with other corporate activities.

Monitoring and measuring extends to the evaluation of culture, performance and preparedness of the organisation. The scope of activities covered by monitoring and measuring also includes monitoring of risk improvement recommendations and evaluation of the embedding of risk management activities in the organisation, as well as routine monitoring of risk performance indicators.

Monitoring the preparedness of the organisation to cope with major disruption is an important part of risk management. This activity normally extends to the development and testing of business continuity plans and disaster recovery plans. There is an overriding need to keep these plans up to date so that the preparedness of the organisation to cope with the identified risk events is assured.

Evaluation of the existing controls will lead to the identification of risk improvement recommendations. These recommendations should be recorded in the risk register by way of a risk action plan. An important part of evaluating the effectiveness of existing controls is to ensure that there is adequate evaluation of the business continuity planning and disaster recovery planning arrangements in place.

Changes in the organisation and the environment in which it operates must be identified and appropriate modifications made to protocols. Monitoring activities should provide assurance that there are appropriate controls in place and that the procedures are understood and followed. Changes within the organisation and the external business environment must be identified, so that existing procedures can be modified.

Any monitoring and measuring process should also determine whether:

- the measures adopted achieved the
- intended result
- the procedures adopted were efficient
- sufficient information was available for the
- risk assessments



- improved knowledge would have helped
- to reach better decisions
- lessons can be learned for future assessments and controls

Embedding risk management involves an environment that can demonstrate leadership from senior management, involvement of staff at all levels, a culture of learning from experience, appropriate accountability for actions (without developing an automatic blame culture) and good communication on risk issues.

Completing the feedback loop on the risk management process involves the important steps of learning from experience and reporting on performance. In order to learn from experience, an organisation needs to review risk performance indicators and measure the contribution that enterprise risk management has made to the success of the organisation.

The reasons for undertaking the risk management initiative should have been clearly established. If this has not been done, the organisation will be unable to evaluate whether the contribution was in line with expectations. Monitoring of risk performance indicators should include an evaluation of the contribution being made by risk management, as well as an evaluation of the appropriateness of the control mechanisms that have been selected.

Learning the lessons from risk management also requires investigation of the opinions of key stakeholders both internally and externally. In particular, the opinion of internal audit and evaluation of risk management activities at audit committee will be vitally important. Learning from experience requires more than evaluation of the risk performance indicators.

An annual review of the risk management framework will be necessary, including evaluation of the risk architecture, strategy and protocols. It is important that the organisation has a risk-based audit plan and undertakes appropriate risk reviews.

Other features of learning from experience include evaluation of audit reports and an assessment of the sources of risk assurance available to the Board and the audit committee. An evaluation of the level of assurance that has been obtained is also necessary. Often, a major source of risk assurance for the Board will be self-certification, such as a Control Risk Self Assessment process that provides assurance regarding risk management, risk reporting and disclosure, as well as information about learning from incidents.

In addition to internal communication and reporting, there will be an obligation on organisations to report externally. Increasingly, these external reports are produced in response to mandatory requirements related to risk management and internal control, such as Turnbull and Sarbanes-Oxley. External risk reporting is designed to provide external stakeholders with assurance that risks have been adequately managed.

External reporting should provide useful information to stakeholders on the status of risk management and the actions that are being taken to ensure continuous improvement in performance. A company needs to report to its stakeholders on a regular basis, setting out its risk management policies and the effectiveness in achieving its objectives. Increasingly, stakeholders look to organisations to provide evidence of appropriate corporate behaviour in such areas as community affairs, human rights, employment practices, health and safety, and the environment.



Risk reporting provides information on historical losses and trends. However, risk disclosure is a more forward-looking activity that anticipates emerging risks. There is a clear difference between measuring and monitoring risk performance and undertaking steps to learn from experience to improve the risk management process and framework. Important lessons can be learned that will assist with improving the design of the support framework and the implementation framework.

## Risk Management checklist:

### Risk architecture:

- Statement produced that sets out risk responsibilities and lists the risk-based matters reserved for the Board.
- Risk management responsibilities allocated to an appropriate management committee.
- Arrangements are in place to ensure the availability of appropriate competent advice on risks and controls.
- Risk aware culture exists within the organisation and actions are in hand to enhance the level of risk maturity.
- Sources of risk assurance for the Board have been identified and validated.

### Risk strategy:

- Risk management policy produced that describes risk appetite, risk culture and philosophy.
- Key dependencies for success identified, together with the matters that should be avoided.
- Business objectives validated and the assumptions underpinning those objectives tested.
- Significant risks faced by the organisation identified, together with the critical controls required.
- Risk management action plan established that includes the use of key risk indicators, as appropriate.
- Necessary resources identified and provided to support the risk management activities.

### Risk protocols:

- Appropriate risk management framework identified and adopted, with modifications as appropriate.
- Suitable & sufficient risk assessments completed & the results recorded in an appropriate manner.
- Procedures to include risk as part of business decision-making established & implemented.



- Details of required risk responses recorded, together with arrangements to track risk improvement recommendations.
- Incident reporting procedures established to facilitate identification of risk trends, together with risk escalation procedures.
- Business continuity plans and disaster recovery plans established and regularly tested.
- Arrangements in place to audit the efficiency and effectiveness of the controls in place for significant risks.
- Arrangements in place for mandatory reporting on risk, including reports on at least the following:
  - Risk appetite, tolerance and constraints
  - Risk architecture and risk escalation procedures
  - Risk aware culture currently in place
  - Risk assessment arrangements and protocols
  - Significant risks and key risk indicators
  - Critical controls and control weaknesses
  - Sources of assurance available to the Board

Steps involved in the implementation of an enterprise risk management (ERM) initiative. Successful implementation of an ERM initiative is an ongoing process that involves working through the 10 steps set out below on a continuous basis. The 10 steps are divided between:

**Planning and designing:**

1. Identify intended benefits of the enterprise risk management initiative & gain board mandate.
2. Plan the scope of the ERM initiative and develop common.
3. Establish the risk management strategy, framework, and the roles and responsibilities.

**Implementing and benchmarking:**

4. Adopt suitable risk assessment procedures and an agreed risk classification system.
5. Establish risk significance benchmarks and undertake risk assessments.
6. Determine risk appetite and risk tolerance levels, and evaluate the existing controls.

**Measuring and monitoring:**

7. Ensure cost-effectiveness of existing controls and introduce improvements.
8. Embed risk aware culture and align risk management with other management tasks.



**Learning and reporting:**

9. Monitor and review risk performance indicators to measure ERM contribution.
10. Report risk performance in line with legal and other obligations, and monitor improvement.

The risk management initiative must be proportionate to the level of risk faced by an organisation. High-risk organisations, for instance, may need to appoint a Chief Risk Officer. ERM activities must be aligned with other activities in the organisation. For example, the output of the risk assessment workshop should be available in time for budget planning.

To be fully effective, ERM initiatives must involve all parts of the organisation, so that all significant risks are identified and managed. ERM activities must respond to emerging and changing risks.



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## STUDY NOTE - 9

# Case Analysis in the context of Management Accounting - Strategic Management

### PART-A

#### **Introduction:**

Case analysis is a proven educational method that is especially effective in a strategic management course. The case method complements and enhances the text material by focusing attention on what a firm has done or should do in an actual business situation. Use of the case method in the strategic management course offers you an opportunity to develop and refine analytical skills. It can also provide exciting experience by allowing you to assume the role of the key decision maker for the organisations you will study.

When assuming the role of the general manager of the organisation being studied, you will need to consider all aspects of the business. In addition to drawing on your knowledge of marketing, finance, management, production, and economics, you will be applying the strategic management concepts taught in this course.

The cases in these notes are accounts of real business situations involving a variety of firms in a variety of industries. To make these opportunities as realistic as possible, the cases include a variety of quantitative and qualitative information in both the presentation of the situation and the exhibits. As the key decision maker, you will need to determine which information is important, given the circumstances described in the case. Keep in mind that the results of analysing one firm will not necessarily be appropriate for another since every firm is faced with a different set of circumstances.

#### **Case Method and Analysis: Guidelines for Case Discussion:**

The case method requires an approach to class preparation that differs from the typical lecture course. In the typical lecture course, you can still benefit from each class session even if you did not prepare, by listening carefully to the professor's lecture. This approach will not work in a course using the case method. For such a case course, proper preparation is essential.

#### **Steps for effective Case Analysis:**

1. **Allow adequate time in preparing a case:** Many of the cases involve complex issues that are often not apparent without careful reading and purposeful reflection on the information in the cases.
2. **Reference to each case should be made at twice:** Because many of these cases involve complex decision making, you should read each case at least twice. Your first reading should give you an overview of the firm's unique circumstances and the issues confronting the firm. Your second reading allows you to concentrate on what you feel are the most critical



issues and to understand what information in the case is most important. Make limited notes identifying key points during your first reading. During your second reading, you can add details to your original notes and revise them as necessary.

3. **Key strategic issues in each case to be highlighted:** Each time you read a case you should concentrate on identifying the key issue. In some of the cases, the key issue will be identified by the case writer in the introduction. In other cases, you might not grasp the key strategic issue until you have read the case several times. (Remember that not every piece of information in a case is equally important).
4. **Give proper attention to exhibits:** The exhibits in these cases should be considered an integral part of the information for the case. They are not just “window dressing.” In fact, for many cases you will need to analyze financial statements, evaluate organisational charts, and understand the firm’s products, all of which are presented in the form of exhibits.
5. **Appropriate time frame to be adopted:** It is critical that you assume the appropriate time frame for each case you read, if the case ends in 1985, that year should become the present for you as you work on that case. Making a decision for a case that ends in 1985 by using data you could not have had until 1986 defeats the purpose of the case method. For the same reason, although it is recommended that you do outside reading on each firm and industry, you should not read material written after the case ended unless your professor instructs you to do so.
6. **All of your knowledge of business to be focused on:** As the key decision maker for the organisation being studied, you will need to consider all aspects of the business and industry. Do not confine yourself to strategic management concepts presented in this course. You will need to determine if the key strategic issue revolves around a theory you have learned in a functional area, such as marketing, production, finance, or economics, or in the strategic management course.

### Power Points for Case Analysis:

1. **Analyse:** Avoid merely repeating the facts presented in the case. Analyze the issues involved in the case and build logically toward your recommendations.
2. **Use headings or labels:** Using headings or labels throughout your written analysis will help your reader follow your analysis and recommendations. For example, when you are analysing the weaknesses of the firm in the case, include the leading weaknesses. Note the headings in the sample case analysis that follows.
3. **Discuss alternatives:** Follow the proper strategic management sequence by (1) identifying alternatives; (2) evaluating each alternative, and (3) recommending the alternative you feel is best.
4. **Use topic sentences:** You can help your reader more easily evaluate your analysis by putting the topic sentence first in each paragraph and following with statements directly supporting the topic sentence.
5. **Be specific in your recommendations:** Develop specific recommendations logically and be sure your recommendations are well defended by your analysis. Avoid using



generalisations, clinches, and ambiguous statements. Remember that any number of answers is possible, and so your professor is most concerned about how your reasoning led to your recommendations and how well you develop and support your ideas.

6. **Do not overlook implementation:** Many good analyses receive poor evaluations because they do not include a discussion of implementation. Your analysis will be much stronger when you discuss how your recommendation can be implemented. Include some of the specific actions needed to achieve the objectives you are proposing.
7. **Specifically state your assumptions:** Cases, like all real business situations, involve incomplete information. Therefore, it is important that you clearly state any assumptions you make in your analysis.

### Case Study No. 1 : Pollution Control Industry

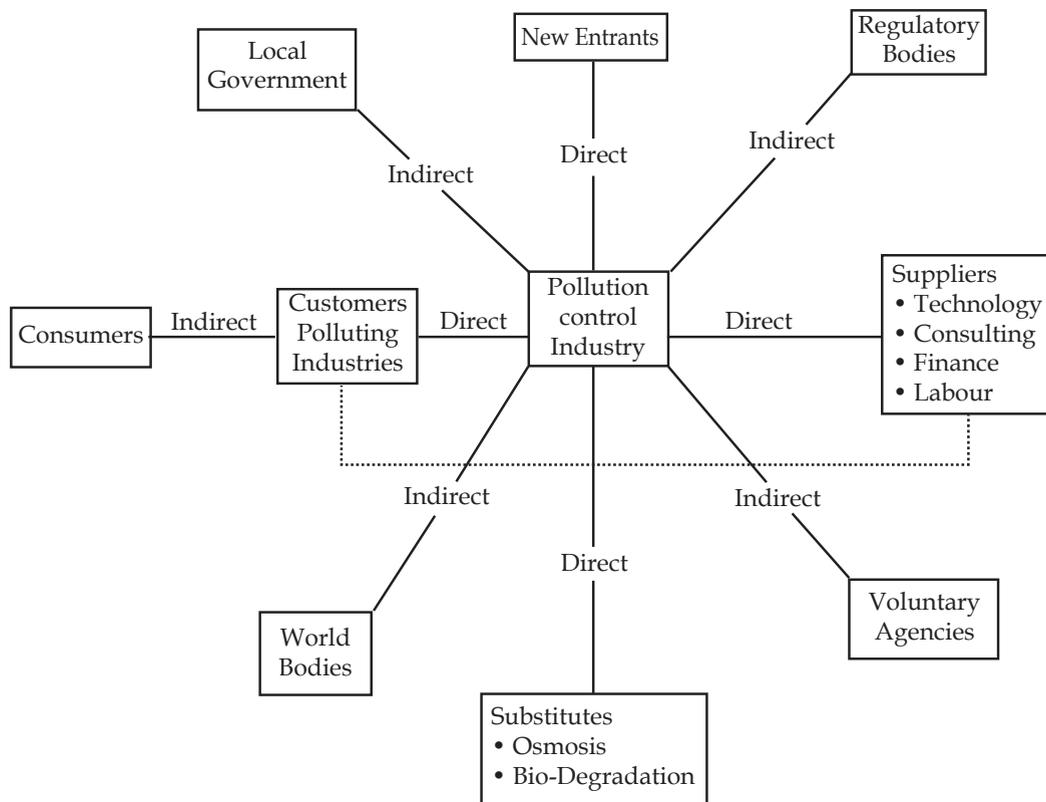
Let us take the pollution control industry to illustrate how strategy is formulated. The industry in our country is characterised by six to seven major participants. The major areas of pollution addressed to are air, water, solid waste and noise pollution. The model for strategy formulation is presented in Fig. 1.

Each of the forces may be analysed in terms of:

- Strength (relative magnitude).
- Direction (for or against the industry)
- Action (acts directly or indirectly through intermediaries)
- Time value (effective for a given period of time)
- Source (originates from).

The strength varies across different forces. Some may be direct but weak (e.g. customers) and some may be indirect but strong (e.g. suppliers to customers). The direction indicates whether strengthening of the force helps the industry or not. For example, strengthening of the forces originating from regulatory bodies will help the industry, however, as the forces from substitutes increase; the industry will suffer in the short term. Thus, each force needs to be analysed.

An in-depth analysis of the forces can help the strategist to evolve a suitable competitive strategy for the industry. In Fig. 1 customers (polluting industries) may not take any active interest in fitting pollution control devices in their firms. The pollution control industry must take the lead. Help (direct and indirect) from regulatory bodies, voluntary agencies, world bodies and local government may be taken to create awareness in the minds of consumers on the impact of environmental pollution. Pressure may thus be brought on polluting industries to install pollution control devices.

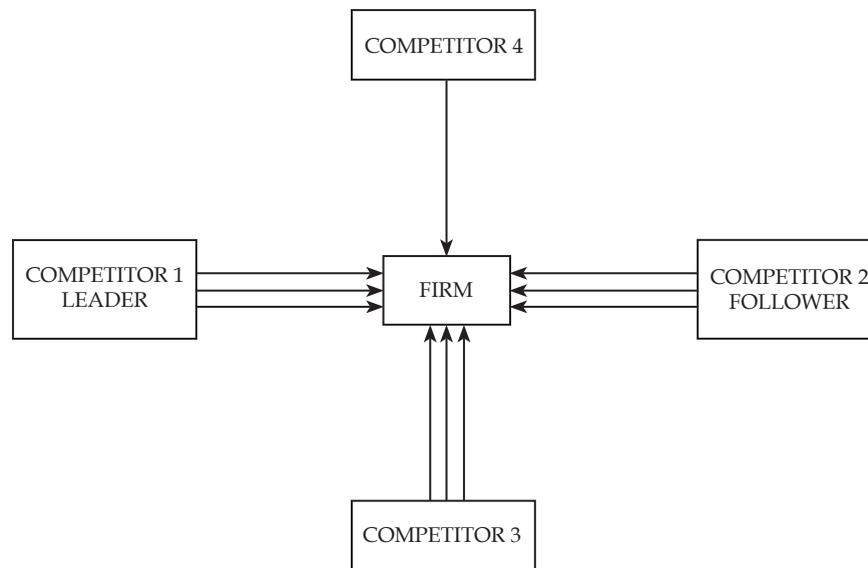


**Figure : 1**

Since this industry is in the business of controlling pollution, it must also encourage innovations/ substitutes like osmosis and bio-generation. The member companies cannot afford to be ignorant about these technological developments, nor can they neglect investing in new technologies. Competitors must spend time and effort in understanding and developing the substitute technologies.

After understanding the forces, one must take steps either to strengthen or weaken them. For example, intense lobbying with the regulatory bodies or through an intensive public relations campaign at the consumer end will improve the long term profitability of the industry. Care needs to be taken to apportion all the generic benefits to the firm.

Coming to the firm level, the forces acting from a single source can have many forms. Typically, these forces are characterised in functional forms. However, a better way to analyse these forces would be to identify the core competency of a firm. The firm can then analyse the force, evolve force dissipators, use force from one competitor to another or develop posture which is new to the industry. This can be identified after grouping the competitors on the strategic force map (See Fig.2)



**Figure : 2**

In summary, companies working on knowledge, time and better human resources with response and flexibility are bound to perform better. Aim of a strategist is to achieve this goal.

### **Case No. 2: SI India Ltd.**

Mr. A has recently joined as the Product Manager of The SI India Ltd., an Indian subsidiary of a multinational food manufacturer with an annual turnover of Rs. 250 Crores. His first major assignment in the company was to give a new marketing thrust to the several leading known brands of the company whose market share was continuously eroding in the face of growing competition.

To begin with, he decided to concentrate on two major bands. Energy Instant Milk powder for family and Tomato Ketchup with an annual turnover of Rs. 40 Crores and Rs.50 Crores respectively. These accounted for a market share of 47% and 27% respectively in 2010-11 as compared to 66% and 43% in 2007-08. In spite of these slides in market shares, these brands retained much higher consumer preference and loyalty vis-à-vis other competitive brands.

With a view to have better appreciation of promotional themes, Mr. A convened a meeting with his advertising agency, S LTD. The meeting produced several new ideas on how to push brands up in the consumer recall and preference.

#### **Questions:**

- 1. List out the possible reasons why the company has suffered a fall in its market share?**

Possible reasons for fall in market share are:

- a) increased domestic and foreign competition
- b) shifts in consumer tastes



- c) increased price cutting and better dealer margins by rivals
  - d) slackness on the part of top management, taking leadership position in the market for granted
  - e) technological advances through better R&D by competitors
2. **If you were the Product Manager, what would be your marketing strategy for arresting the trend of slackening sales in the light of the meeting with the advertising agency?**

Marketing strategy should aim at the following:

- a) Find new users - convince people who do not consume milk powder and tomato ketchup to start using the same market-penetration strategy.
- b) New users - discover and promote new uses for the products.
- c) Continuous innovation through better R&D.
- d) Increase distribution effectiveness.
- e) Maintain price level or reduce the same through cost cutting.

### Case No. 3: Z Ltd.

The ABC Ltd. and the West-Bengal Government in collaboration with E of France promoted Z Ltd. Having started its production in 2005, this company has already become the market leader in quartz watches. The company identified the gap of indigenously made quartz watches, and quickly established itself in that slot by launching its up-market range of watches. Z watches had what others lacked, namely, styles. Z launched a double-pronged strategy to capture the market:

- a) To attack down market segment with fashionable, lower priced rugged, durable and tough watches.
- b) To offer up-market gold-plated watches with bracelets, precious stones and designer prices to denote exclusivity.

Z's broad marketing strategy has been to:

- a) Persuade people to see quartz watches as reflecting their personality and life style, and creating an image that it is a pioneer in quartz technology.
- b) Stimulate replacement demand.
- c) Change the notion that 'a watch is bought for a life time'.
- d) Promote the idea that watches are sometimes like a piece of apparel or a fashionable accessory.

Z Ltd. used extensive multi-media advertising; it spent considerable sums on advertisements. It also introduced path-breaking techniques like promotion by catalogues, attached price tags and improved display. Z distributes its watches directly to retailers. The most unique-element of its distribution strategy is to push its watches through non-traditional outlets such as textile showrooms, department stores, and jewelry shops and even auto showrooms. This has been the story till 2009.

In the latest survey on the most admired marketing companies in the durable sector, Z stood first. The reasons sited are good branding, a diverse and well-knit distribution system and



production development skills. Z is market leader with a 42 percent market share of the 12 million watches currently sold in the market per annum. The company had 25 launches till date combined with an aggressive price strategy.

Z succeeded in selling 5.1 million watches in 2009-10 an 18 percent increase over the last year. Its rival HT's sales have stagnated at 3.5 million units. The reason for the success has been their perceptible changes in the strategy from the product management fold. The company had decided to reach out to a larger customer base and has progressively moved into the lower price segment, to capture a bigger share of the market.

To avoid compromising on its premium image, Z is promoting its sub-brands as independent entities. Z used to outsource the fully assembled watches. A tariff barriers fall in line with WTO rules, the Indian watchmaker will be exposed to competition from global majors such as Casio, Swatch and Citizen. The company has raised its advertising and marketing budgets by 36.5% and 18.9% respectively over the last year. Z's product management team is aiming to combine its retailing and manufacturing strengths to become the number one in developing and marketing world-class watches in India.

#### Questions:

**1. Do you think Z is following the right strategy? Justify your answer.**

Yes. Z is following the right strategy. The decision to promote its sub-brands as independent entities is very timely keeping in view the likely competition from world majors like Casio, Swatch and Citizen. These foreign competitors will bring into India, premium watches of international class, Z can now focus on high-end premium watches where the margins are very huge and leave the economy brands to new subsidiary companies for better marketing.

**2. With severing ties with T Ltd., what has been the safeguard Z's product management team needs to follow?**

The following safeguards are needed:

- a) Clearly delineate the limits of the product manager's role and responsibility for the product.
- b) Build a strategy - development and review process.
- c) Take into account areas of potential conflict between product managers and functional managers when defining their respective roles in the new set up.

**3. What are your recommendations to the product management team for the future?**

The following recommendations are made:

- a) Develop a long-range and competitive strategy for the company's product keeping in view the financial muscle of international competitors.
- b) Work closely with advertising and merchandising agencies to develop copy, programs and campaigns more effectively.
- c) Stimulate active support for the company's products among the sales force and distributors.
- d) Gather continuous intelligence on consumer's attitudes and responses.



### Case No. 4: M Industries

M Industries is a leading Fast Moving Consumer Goods (FMCG) company with its brands enjoying predominant positions in their respective category. Known for its flagship brand - Dharachute, M's brand wagon consists of other established brands. M decided to utilise the brand equity of its flagship brand -Dharachute coconut oil. It is the oldest brand and contributes 52.3% share of the coconut oil market over a period of time. During the late nineties, M launched three variants of Dharachute - Dharachute Liter, Dharachute Nutrisheen liquid and Nutrisheen cream.

Dharachute Liter is termed as the younger Dharachute targeted at those who believe in the purity and nourishment attributes of the mother brand but without the greasiness associated with the oil. However, the price was higher than the mother brand. Dharachute Nutrisheen is positioned as an instant non-oily grooming formula. Essentially a liquid cream with no oil gives smooth and shiny hair. The performance of this product has been dismal admitted by the company; the brand suffers from a problem of acceptance. This has a new concept requiring hard sell approach; the product was launched only in 12 major cities of the country.

Dharachute Nutrisheen grooming cream assures a non-oily formula, which gives smooth and shiny hair. This product is definitely going to capture the market of the future. Hair creams are perceived to be male grooming aides and this category is still very small in the country. With increasing awareness in male grooming, this market would mature in the next five years, the company expects. Positioned at the premium end. All the above brands are from the mother brand - Dharachute coconut oil that is targeted at lower middle and middle class people.

#### Questions:

1. **Do you think product line stretching/product line extensions are advisable for a FMCG company? If so, identify the merits and demerits of the same.**

Product line stretching is very useful for a Fast Moving Consumer Goods (FMCG) company. The merits of such a more are:

- i) It helps in achieving a higher market share and market growth.
- ii) Carrying a longer product line will help in utilising excess manufacturing capacity effectively.
- iii) This will greatly benefit the sales force and distributors who normally pressurise the company for a complete product line to satisfy their customers.
- iv) Greater sales will result in more profits.

The demerits are:

- i) Increase in design and engineering costs, inventory carrying costs and new-item promotional costs.
- ii) Newly introduced low priced items may take away the sales of high priced items.



## Case No. 5: NL Limited

NL Limited (NL) is a producer of health foods. The company was set up in 2005 by Harvinder Singh who was formerly a Production Executive with one of the larger producers of packaged foods in India. Mr. S always wanted to own and operate his own business. He welcomed the change to breakaway from what he termed a giant bureaucracy. In 2006, NL was earning a return on investment of 20 percent. The company sale in that year was Rs. 260 lakh. Mr. S felt that the firm was very successful but his objective was to increase sales and profits. In his own opinion as a marketer, this could be accomplished without continually adding new products.

The company produced several items like salt free nuts, roasted nuts, dehydrated fruits, and almond and cream biscuits. The other items like packed teas, coffee, vitamins and ice creams produced from other producers and used the NL brand on them. Mr. S has targeted on middle and upper middle class living in urban areas. Some of his competitors aimed upper middle and luxury class while some others oriented their marketing mix primarily on health conscious people.

NL distributed its products throughout the country using wholesalers. Four Regional managers of the company supervised these. 24 Area managers reported to these Regional managers. In 2008, some of the company operating personnel came up with a new cereal product they felt could be profitably sold by the firm. The product resembled corn flakes in structure, but had a nutty flavour. Further, it contained most of the vitamins recommended by the physicians plus folic acid, minerals, iron and calcium. The feedback upon testing was encouraging; Mr. S decided to introduce it to the mass consumer market. In his opinion, the major super market chain would be invited to carry this product. He branded the product as V.

### Questions:

**1. What are the new product launching strategies available for V? Explain.**

The new product launching strategies available for V's are:

- It can be launched as a breakfast item. Normally corn flakes are taken along with milk as a breakfast item. Further being a cereal item it will make for a whole some meal and keep the consumer energetic.
- It can be launched as a health food keeping a view that it contains most of the vitamins recommended by physicians plus calcium, folic acid, iron minerals etc.

**2. Do you think Mr. S is following the right distribution strategy?**

Yes. Mr. S is following the right distribution strategy by choosing a major super market chain for his new product. Such chain stores are most suitable for low-cost, low-margin high volume items. Further a large market can be covered at less cost.

**3. Develop a marketing mix strategy for V.**

- Develop the product as a "Health Food good for Breakfast".
- Use aggressive advertising strategies preferably along with doctor's opinions to boost sales.
- Since the company is focusing mainly on middle classes, it can actively promote the new product by giving free samples in the initial stages.



## Case No. 6: Umbrella Market in India

The Indian umbrella market can be classified as, single umbrellas, single to triple fold umbrellas, spring action 'piano type' umbrellas, fancy umbrellas and specialised large golf and garden umbrellas. The sales of golf and garden umbrellas are limited and are sold through exclusive retail shops. Also there is a large institutional sale and cutthroat promotional and gift offers in the market in this category. Modern umbrellas are as old as 120 years in India. Mohendra LaL Dutt and K.C. Paul are the pioneers of this industry.

Companies and Police departments provide their outdoor staff with umbrellas on their own cost. Dutt and Paul are well-known names in the east; brands like Sun, Stag and Ebrahim Currim are popular in the west. North has brands like Chandini and Campus while St. George, Popy are famous in South India especially the more rain affected Kerala. Till the fifties, there were two kinds of umbrellas in the country, the Bengali ones, popular in the east and the Colombo umbrella assembled in Konkan and Malabar and popular in the South and West. All these umbrellas used cane or bamboo staves.

During the sixties, the steel tube umbrella was introduced and instantly became popular because it was lighter and less bulky. Dutt working on a brand strategy, has created and floated his own brand called "MD" and hoped to take on foreign brands when they come in due to the Indian liberalisation policy.

### Questions:

1. **Is there any scope for a national brand for umbrellas? As a product manager of such a company, how would you prepare a product policy?**

Indians prefer brands which are very popular at the national level. At present most of the brands in umbrellas are regional in nature. Hence, there is ample scope for a national brand for umbrellas. The product manager should:

- Develop a long-range and competitive strategy for the product
- Prepare annual marketing plan and sales forecast
- Work closely with advertising agencies to develop programs and campaigns at the national level to take on foreign brands when they come to India.

2. **Will MD brands succeed? What brand strategy the company will have to adopt?**

While choosing a brand the company should ensure that:

- i) It suggests something about the product
- ii) It should suggest product quality
- iii) It should be easy to pronounce

The company should first test market the product to study the response of consumers. Only when the brand evokes good feelings among the consumer it should think of continuing with the brand name. Umbrellas are low priced items. Hence, the cost involved in promoting the brand should be reasonable. Umbrellas are a necessity. Hence the brand strategy should be to promote it as national brand fulfilling a necessity. By ensuring good quality, it can be promoted as a product with durability.