M.Com. 4th Semester

Course: MC 402

ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT

(DSC)

Lesson 1 to 20

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MC 402: ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT (DSC)

Max. Marks 80

Internal Assessment 20

Note: There will be Ten (10) questions in all spreading into Five Units consisting of two questions from each unit. The candidate will require to attempt one question from each unit. Each question will carry Sixteen (16) marks

Course Objective: This course aims to provide necessary inputs for entrepreneurial effort and planning to start a new venture and taking investment decisions to enable them to investigate, understand and internalize the process of setting up a business and project planning.

Course Contents:

Unit I

Introduction: Concept of Entrepreneurship; Role of entrepreneurship in economic development; Factors impacting emergence of entrepreneurship; Types of entrepreneurs; Characteristic of successful entrepreneurs.

Entrepreneurship Development and Leadership: Types of startups; Entrepreneurial training; Entrepreneurship Development Programmes; Characteristics of entrepreneurial leadership, Components of entrepreneurial leadership

Unit II

Identification of Investment Opportunities: Project ideas generation and screening. Phases in Project Management, Project feasibility study, Appraisal criteria and process; Methods of appraisal under certainty, uncertainty and risk.

Unit III

Market and Demand Analysis: Sources of information – primary and secondary; Demand forecasting and market planning;

Technical analysis: Materials and inputs; Production technology; Product mix; Plant location and layout; Selection of plant and equipment.

Unit IV

Financial Analysis: Cost of project and means of financing; Major cost components; Planning capital structure; Financing schemes of financial institutions.

Unit V

Social Cost Benefit Analysis: Meaning and methodology; L & M and UNIDO approach; SCBA in India Project implementation; PERT and CPM. Problem of time and cost overrun, Project implementation practices in India. Project Review/control – Evaluation of Project.

Course outcome

After learning of the course, the students will be able:

• To develop entrepreneurship skills.

• To know about the process of pursuing projects and preparing project reports.

References:

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
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Unit-wise Content

Lesson 1

Entrepreneurship: An Introduction

Structure

1.0 Introduction

Before the concept of entrepreneurship is explored, it is important to, first, understand the meaning of 'entrepreneur' and know who can be an entrepreneur. An entrepreneur is someone who exercises initiative by organizing a venture to take benefit of an opportunity and, as the decision maker, decides what, how, and how much of a good or service will be produced. An entrepreneur supplies risk capital as a risk taker, and monitors and controls the business activities. The entrepreneur is usually a sole proprietor, a partner, or the one who owns most shares in an incorporated venture. If one desires to be an entrepreneur, the given equation is what describes, what an entrepreneur is:

Entrepreneur + Capital = Products + Customers = Business.

1.1 Learning Objectives

After studying this lesson, students will be able to understand:

- The meaning, types, motives and skills of entrepreneurs.
- The meaning, definitions, history, functions, and history of entrepreneurship.
- The types, characteristics, importance, and process of entrepreneurship.
- The advantages, limitations, and role of entrepreneurship.

1.2 Definitions

- **Oxford Dictionary**, "A person who sets up a business or businesses, taking on financial risks in the hope of profit".
- **Encyclopaedia**, "An individual who bears the risk of operating a business in the face of uncertainty about the future conditions".
- **Schumpeter**, "The entrepreneur, in an advanced economy is an individual who introduces something new in the economy – a method of production not yet tested by experience in the branch of manufacturing, a product with which consumers are not yet familiar, a new source of raw material or of new markets and the like".
- **Adam Smith,** "The entrepreneur is an individual, who forms an organization for commercial purpose. She/he is proprietary capitalist, a supplier of capital and at the same time a manager who intervenes between the labour and the consumer. "Entrepreneur is an employer, master, merchant but explicitly considered as a capitalist".
- **Peter F. Drucker**, "An entrepreneur is the one who always searches for change, responds to it and exploits it as an opportunity. Innovation is the specific tool of entrepreneurs, how they exploit changes as an opportunity for a different business or different service".

1.3 Types of Entrepreneurs

Depending upon the level of willingness to create innovative ideas, there can be the following types of entrepreneurs:

- **Innovative Entrepreneurs:** These entrepreneurs can think newer, better and more economical ideas of business organisation and management. They are the business leaders and contributors to the economic development of a country. Inventions like the introduction of a small car 'Nano' by Ratan Tata, organised retailing by Kishore Biyani, making mobile phones available to the common man by Anil Ambani are the works of innovative entrepreneurs.
- **Imitating Entrepreneurs:** These entrepreneurs are people who follow the path shown by innovative entrepreneurs. They imitate innovative entrepreneurs because the environment in which they operate is such that it does not permit them to have creative and innovative ideas on their own. In our country also, many such entrepreneurs are found in every field of business activity. Development of small shopping complexes is the work of imitating entrepreneurs. All the small car manufacturers now are the imitating entrepreneurs.
- **Fabian Entrepreneurs:** Fabian entrepreneurs are those individuals who do not show initiative in visualising and implementing new ideas and innovations. On the contrary, they like to wait for some development, which would motivate them to initiate unless there is an imminent threat to their very existence.
- **Drone Entrepreneurs:** Drone entrepreneurs are those individuals who are satisfied with the existing mode and speed of business activity and show no inclination in gaining market leadership. In other words, drone entrepreneurs are 'die-hard conservatives' and even ready to suffer the loss of business.
- **Social Entrepreneurs:** Social entrepreneurs drive social innovation and transformation in various fields including education, health, human rights, workers' rights, environment and enterprise development.
- **Agricultural Entrepreneur:** The entrepreneurs who undertake agricultural pursuits are called Agricultural Entrepreneurs. They cover a wide spectrum of agricultural activities like cultivation, marketing of agricultural produce, irrigation, mechanization and technology.
- **Trading Entrepreneur:** As the name itself suggests, the trading entrepreneur undertakes the trading activities. He/she procures the finished products from the manufacturers and sells these to the customers directly or through a retailer. These serve as the middlemen as wholesalers, dealers, and retailers between the manufacturers and customers.

- **Manufacturing Entrepreneur:** The manufacturing entrepreneurs manufacture products. They identify the needs of the customers and, then, explore the resources and technology to be used to manufacture the products to satisfy the customers' needs.
- **Women Entrepreneurs:** Women entrepreneurship is defined as the enterprises owned and controlled by a woman/woman having a minimum financial stake of 51 per cent of the capital and giving at least 51 per cent of employment generated in the enterprises to women.
- **Inventors and Challenger Entrepreneurs:** Inventor entrepreneurs with their competence and inventiveness invent new products. Their basic interest lies in research and innovative activities and Challenger entrepreneurs plunge into industry because of the challenges it presents. When one challenge seems to be met, they begin to look for new challenges.
- **Life-Timer Entrepreneurs:** These entrepreneurs take business as an integral part to their life. Usually, the family enterprise and businesses which mainly depend on exercise of personal skill fall in this type/category of entrepreneurs.

1.4 Meaning of Entrepreneurship

Entrepreneurship is the ability and readiness to develop, organize and run a business enterprise, along with any of its uncertainties to make a profit. The most prominent example of entrepreneurship is the starting of new businesses. In economics, entrepreneurship connected with land, labour, natural resources and capital can generate a profit. The entrepreneurial vision is defined by discovery and risk-taking and is an indispensable part of a nation's capacity to succeed in an ever-changing and more competitive global marketplace.

The entrepreneur is defined as someone who has the ability and desire to establish, administer and succeed in a startup venture along with risk entitled to it, to make profits. The best example of entrepreneurship is the starting of a new business venture. The entrepreneurs are often known as a source of new ideas or innovators, and bring new ideas in the market by replacing old with an invention. It can be classified into small or home business to multinational companies. In economics, the profits that an entrepreneur makes is with a combination of land, natural resources, labour and capital. Thus, anyone who has the will and determination to start a new company and deals with all the risks that go with it can become an entrepreneur.

1.5 History of Entrepreneurship

The term "entrepreneurship" can be traced back to as early as the Middle Ages, when the "entrepreneur" was simply someone who carried out tasks, such as buildings and construction projects by applying all the resources at his disposal. However, it was during the 16th century when “business” was used as a common term, and the “entrepreneur’’ came into focus, as a person, who is responsible for undertaking a business venture.

Entrepreneurship as a term can be traced back to the economists of the eighteenth century, and it continued to attract the interest of economists in the nineteenth century. In the twentieth century, the word became synonymous with free enterprise and capitalism.

During the 20th century, within the last two decades, the concept of entrepreneurship has evolved from being a single individual to an entire organization or a corporation.

1.6 Definitions

- **Peter F. Drucker**, “Entrepreneurship is defined as a systematic innovation, which consists in the purposeful and organized search for changes, and it is the systematic analysis of the opportunities such changes might offer for economic and social innovation”.
- **Ricardo Cantillon**, “Entrepreneurship entails bearing the risk of buying at a certain price and selling at uncertain prices.”
- **Joseph A. Schumpeter**, “Entrepreneurship is any kind of innovative function that could have a bearing on the welfare of an entrepreneur.”
- **Robert K. Lamb**, “Entrepreneurship is that form of social decision making performed by economic innovators.”
- **H. Cole**, “Entrepreneurship is the purposeful activity of an individual or a group of associated individuals, undertaken to initiate, maintain or aggrandize profit by production or distribution of economic goods and services.”

1.7 Functions of Entrepreneurship

The various functions of entrepreneurship are Innovation and creativity, Risk taking and achievement and organization and management, Catalyst of Economic Development, Overcoming Resistance to Change and Research. The functions of the entrepreneurship are as under:

- **Innovation and Creativity:** Innovation generally refers to changing processes or creating more effective processes, products and ideas. For businesses, this could mean implementing new ideas, creating dynamic products or improving your existing services. Creativity is defined as “the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others. Creativity and innovation have always been recognized as a sure path to success. Entrepreneurs think outside of the box and explore new areas for cost-effective business solutions.

- **Risk taking and Achievement:** Entrepreneurship is a process in which the entrepreneur establishes new jobs and firms, new creative and growing organization which is associated with risk, new opportunities and achievement. It results in introducing a new product or service to society. The entrepreneurs accept four types of risks namely financial risk, job risk, social risk, family risk, mental risk and health Risk, are as follows:
  - **Financial Risk:** Most of entrepreneurs begin by using their own savings and personal effects and if they fail, they have the fear of losing it. They take risk of failure.
  - **Job Risk:** Entrepreneurs, not only follow the ideas as working situations, but also consider the current risks of giving up the job & starting a venture. Several entrepreneurs have the history of having a good job, but gave it up, as they thought that they were not cut out for a job.
  - **Social and Family Risk:** The beginning of entrepreneurial job needs a high energy which is time consuming. Because of these undertakings, he/she may confront some social and family damages like family and marital problems resulting on account of absence from home and not being able to give adequate time to family.
  - **Mental Health Risk:** Perhaps the biggest risk that an entrepreneur takes it is, the risk of mental health. The risk of money, home, spouse, child, and friends could be adjusted but mental tensions, stress, anxiety and the other mental factors have many destructive influences because of the beginning and continuing of entrepreneurial activity. This can even lead to depression, when faced with failure.
- **Organization and Management:** The entrepreneurial organization is a simple organizational form that includes, one large operational unit, with one or a few individuals in top management. Entrepreneurial management means the skills necessary to successfully develop and manage a business enterprise. A small business start-up under an owner-manager is an example of an entrepreneurial organization. Here, the owner-manager generally maintains strict control over business operations. This includes directing the enterprise's core management

functions. According to Mintzberg, these include the interpersonal roles, informational roles and decision-making roles. The smaller the organization, the more concentrated these roles are in the hands of the owner-manager. The entrepreneurial organization is generally unstructured.

- **Research:** An entrepreneur is a practical dreamer and does a lot of ground-work before taking a leap in his/her ventures. In other words, an entrepreneur finalizes an idea only after considering a variety of options, analysing their strengths and weaknesses by applying analytical techniques, testing their applicability, supplementing them with empirical findings, and then choosing the best alternative. It is then that he/she applies the ideas in practice. The selection of an idea, thus, involves the application of research methodology.
- **Overcoming Resistance to Change:** New innovations are generally opposed by people because it makes them change their existing behaviour patterns. An entrepreneur always first tries new ideas at his/her level. It is only after the successful implementation of these ideas that an entrepreneur makes these ideas available to others for their benefit. His/her will power, enthusiasm and energy help him/her in overcoming the society's resistance to change.
- **Catalyst of Economic Development:** An entrepreneur plays an important role in accelerating the pace of economic development of a country, by discovering new uses of available resources and maximizing their utilization. Today, when India is a fast-developing economy, the contribution of entrepreneurs has increased multi-fold.

1.8 Types of Entrepreneurships

The various types of entrepreneurships are as follows:

- **Small Business Entrepreneurship:** These businesses are a hairdresser, grocery store, travel agent, consultant, carpenter, plumber, electrician, etc. These people run or own their own business and hire family members or local employee. For them, the profit would be able to feed their family and not making 100 million business or taking over an industry. They fund their business by taking small business loans or loans from friends and family.
- **Scalable Startup Entrepreneurship:** This start-up entrepreneur starts a business knowing that their vision can change the world. They attract investors who think and encourage people who think out of the box. The research focuses on a scalable business

and experimental models, so, they hire the best and the brightest employees. They require more venture capital to fuel and back their project or business.

- **Large Company Entrepreneurship:** These huge companies have defined life-cycle. Most of these companies grow and sustain by offering new and innovative products that revolve around their main products. The change in technology, customer preferences, new competition, etc., build pressure for large companies to create an innovative product and sell it to the new set of customers in the new market. To cope with the rapid technological changes, the existing organisations either buy innovation enterprises or attempt to construct the product internally.
- **Social Entrepreneurship:** This type of entrepreneurship focuses on producing product and services that resolve social needs and problems. Their only motto and goal are to work for society and not make any profits.

1.9 Characteristics of Entrepreneurship

The characteristics of entrepreneurship are as under:

- **Risk taking:** Starting any new venture involves a considerable amount of failure risk. Therefore, an entrepreneur needs to be courageous and able to evaluate and take risks, which is an essential part of being an entrepreneur.
- **Innovation:** It should be highly innovative to generate new ideas, start a company and earn profits out of it. Change can be the launching of a new product that is new to the market or a process that does the same thing but in a more efficient and economical way.
- **Visionary and Leadership:** To be successful, the entrepreneur should have a clear vision of his new venture. However, to turn the idea into reality, a lot of resources and employees are required. Here, leadership quality is paramount because leaders impart and guide their employees towards the right path of success.
- **Creative:** In a business, every circumstance can be an opportunity and used for the benefit of a company. For example, Paytm recognised the gravity of demonetization and acknowledged the need for online transactions would be more, so it utilised the situation and expanded massively during this time.
- **Flexible:** An entrepreneur should be flexible and open to change according to the situation. To be on the top, a businessperson should be equipped to embrace change in a product and service, as and when needed.

- **Product knowledge:** A company owner should know the product offerings and be aware of the latest trend in the market. It is essential to know if the available product or service meets the demands of the current market, or whether it is time to tweak it a little. Being able to be accountable and then alter as needed is a vital part of entrepreneurship.

1.10 Importance of Entrepreneurship

The importance of entrepreneurship is given as follows:

- **Employment generation:** Entrepreneurship generates employment. It provides an entry-level job, required for gaining experience and training for unskilled workers.
- **Innovation:** It is the hub of innovation that provides new product ventures, market, technology and quality of goods, etc., and increase the standard of living of people.
- **Community Development:** A society becomes greater if the employment base is large and diversified. It brings about changes in society and promotes facilities like higher expenditure on education, better sanitation, fewer slums, a higher level of homeownership. Therefore, entrepreneurship assists the organisation towards a more stable and high quality of community life.
- **Enhanced Standard of Living:** Entrepreneurship helps to improve the standard of living of a person by increasing the income. The standard of living means, increase in the consumption of various goods and services by a household for a particular period.
- **Research and development:** New products and services need to be researched and tested before launching in the market. Therefore, an entrepreneur also dispenses finance for research and development with research institutions and universities. This promotes research, general construction, and development in the economy.

1.11 Motives to become Entrepreneur

The main motives of individual to become entrepreneurs are as follows:

- **Change:** Many entrepreneurs strive to make the world better. Whether entrepreneurs believe in space exploration, eliminating poverty, or creating a practical but game-changing product, they ultimately build a brand in the service of others. Some entrepreneurs use their business to raise capital quickly to funnel into their noble causes.
- **Freedom:** Entrepreneurs often struggle with having a boss. They might feel suffocated and held back. Some entrepreneurs may feel they have a more effective way of doing things. Others may dislike the lack of creative freedom. Ultimately, they become attracted to entrepreneurship to succeed on their own terms.
- **Flexibility:** Entrepreneurship is popular with those who need flexible hours. For example, many people with disabilities enjoy entrepreneurship, allowing them to work

when they can. Parents can raise their children at home or pick them up from school without feeling guilty. Students get the flexibility to work around their demanding schedules and courseloads.

- **Work anywhere:** Along with flexibility in working hours, entrepreneurship is popular among those who do not want to be tied down to a specific location. Entrepreneurs might not want to work from the same place every day, as this can get boring fast.
- **Curiosity:** Entrepreneurs love finding out the answer to the question, "What will happen if." They are experimental and love learning. They regularly read business books to advance their knowledge. So naturally, entrepreneurship appeals to them because pursuing it allows them to learn the most in the shortest amount of time. Their curiosity allows their continued growth.
- **Ambitious:** Those who love reaching difficult goals and milestones are made to be entrepreneurs. Since there is no limit to what they can achieve, entrepreneurs constantly find their projects growing improved than they ever imagined. When obstacles come up, they find a workaround to their goal. They are unstoppable.

1.12 Process of Entrepreneurship

The process of entrepreneurship is as follows:

- **Step-1-Search for a new Idea:** An entrepreneurial process begins with the idea generation, wherein the entrepreneur identifies and evaluates the business opportunities before him/her.
- **Step-2-Preliminary assessment of Idea:** The identification and the evaluation of opportunities is a difficult task; therefore, an entrepreneur seeks inputs from all the persons including employees, consumers, channel partners, technical people, etc. to reach to an optimum business opportunity. Once the opportunity is decided, the next step is to evaluate it.
- **Step-3-Detailed analysis of promising Idea:** An entrepreneur can evaluate the efficiency of an opportunity by continuously asking certain questions such as, whether the opportunity is worthy of investing, its attractiveness, proposed solutions feasibility, chances of competitive advantage and various risks associated with it etc. Above all, an entrepreneur must analyse his/her personal skills and capabilities to ensure realisation of entrepreneurial Goals.

- **Step-4-Selection of the most promising Idea:** Once the analysis is done at both macro and micro level, then the entrepreneur selects the best possible option amongst the chosen few, based on the key factors identified by him/her before idea generation.
- **Step-5-Assembling the Resource and Personnel:** The next step in the process is resourcing, wherein, the entrepreneur identifies the sources from where the finance and the human resource can be arranged. Here, the entrepreneur finds the investors for its new venture and the personnel to carry out the business activities.
- **Step-6-Determining size of unit:** Based on the ability to manage resources, the entrepreneur determines the initial size of the business and the possibilities of expansion.
- **Step-7-Deciding location of Business and Planning Layout:** This is a significant decision. Entrepreneur should ideally decide the location where there are Tax holidays, cheap labour and material are available in abundance.
- **Step-8-Sound Financial Planning:** Once the funds are raised and the employees are hired, business location and layout have been finalised, then efforts are made to do sound financial planning with the available financial resource to put it to optimum use.
- **Step-9-Launching the Enterprise:** Launching the enterprise by an entrepreneur can be a daunting adventure as the entrepreneur needs to stay focused and should always be open to suggestions. If he/she is mission-driven entrepreneur, it must be remembered that building a truly great company is a marathon, not a sprint.
- **Step-10-Managing the Company:** Once the funds are raised and the employees are hired, the next step is to initiate the business operations to achieve the set goals. First, an entrepreneur must decide the management structure or the hierarchy, which is required to solve the operational problems, as and when they arise.
- **Step-11-Harvesting:** The final step in the entrepreneurial process is harvesting, wherein, an entrepreneur decides on the prospects of the business, such as its growth and development. Here, the actual growth is compared against the planned growth and then the decision regarding the stability or the expansion of business operations are taken.

1.13 Entrepreneurship in Indian Society

In India, there is a peculiar Joint Family Structure, which has been a source of success of many Indian businesses. But that success has been possible due to economic liberalization in India. That success will continue, only if the reforms continue and if the risks that could derail the growth due to terrorism, political corruption, stalled reforms and growth that focuses only on the urban rich, are tackled well by the Government.

- **The pre 1990 period:** For the old business houses, success had come from the close-knit joint family structure that fosters family values, teamwork, tenacity and continuity. Under this structure, generations lived and worked together under one roof. Wealth from the businesses supported the joint family by providing a social safety net for members. In the structure, businesses and families were intertwined though they were also distinct entities with separate rules. Hence, survival of the family became synonymous with the survival of the business. Prior to the decade of 90s, Indian business success was a function of ambition, licenses, government contacts, and an understanding of the bureaucratic system. Decisions were based on connections, rather than the market or competition. During this era, entrepreneurship was subdued, capital was limited and India had very few success stories.
- **The post 1990 period:** In 1991, the Indian government liberalized the economy, thus changing the competitive landscape. Family businesses, which dominated Indian markets, then faced competition from multinationals, which boasted of superior technology, financial strength and deeper managerial resources. Thus, Indian businesses had to change
- Entrepreneurs do not just start a business from scratch and generate profits for themselves. They also significantly impact society and the economy by creating employment and products or services that can improve the quality of life for many. But not everyone can take on the risk of their venture or the magnitude of such a responsibility. In this article, let us look at the top ten entrepreneurship skills and how to improve them to scale your business, take challenges head-on, and succeed.

1.14 Skills required to become a good Entrepreneur

The following skills are needed to become a good entrepreneur:

- **Business Management Skills:** Business management skills are essential for entrepreneurs to effectively plan, organize, direct, and control the resources of an organization. These skills can build credibility, improve efficiency, manage risks, implement effective strategies, create a positive company culture, and grow a business. Business management skills include such as leadership, strategic thinking, budget management, business acumen and communication.

- **Communication and Listening:** Communication skills allow individuals to express thoughts, ideas, and feelings clearly through speaking, writing, and other forms of expression. Listening skills provide the ability to understand and retain information and respond appropriately. Both communication and listening are essential entrepreneurship skills that can make a difference in how you run your business as they help you to build trust, maintain relationships, resolve conflicts, understand needs and perspectives, and make informed decisions. Communication and listening skills include written communication, non-verbal communication, stress management, active listening, and emotion control.
- **Critical and Creative Thinking Skills:** Strong critical and creative thinking skills are essential for entrepreneurs to build and expand their businesses. Critical thinking allows you to objectively analyse information using the evidence to make informed decisions and solve problems. Creative thinking provides a way to look at issues from various angles, consider alternative perspectives, and come up with original ideas. Critical and creative thinking skills include analysis, brainstorming, visualization, evaluation, and research.
- **Strategic Thinking and Planning Skills:** Strategic thinking and planning skills allow entrepreneurs to analyse information, adapt, manage projects, solve problems, and make informed decisions. These entrepreneurship skills are vital in helping leaders overcome challenges and ensure efficient allotment of resources and achievement of goals. Strategic thinking and planning skills include analysis, implementation, flexibility, attention to detail and assertiveness.
- **Branding, Marketing and Networking Skills:** In today's competitive business environment, branding, marketing, and networking skills are essential for scaling the business and boosting opportunities. These skills enable entrepreneurs to promote and sell products or services. Branding creates a unique and memorable image of a product, service, or organization, and marketing promotes them to target consumers. Networking builds relationships and allows individuals to connect with potential customers, partners, suppliers, or colleagues. Branding, marketing, and networking skills include collaboration, communication, interpersonal skills, creativity and collaboration.
- **Entrepreneurial Skills in the Workplace:** The skills in the workplace refer to qualities that enable individuals to effectively create and manage their businesses, as well as drive innovation and growth within organizations. Entrepreneurial skills in the

workplace include such as time management, finance skills, sales, adaptability and problem-solving.

- **Teamwork and Leadership Skills:** Teamwork and leadership are highly critical entrepreneurship skills that foster a positive and collaborative organizational culture, leading to increased employee satisfaction and improved performance. These qualities can enable leaders to effectively inspire, motivate, work in teams, and lead the company toward success. Teamwork and leadership skills include communication, emotional intelligence, empathy, delegation and conflict resolution.
- **Time Management and Organizational Skills:** Great leaders should know how to delegate and prioritize tasks, manage their time and resources, and maintain a well-structured and efficient work environment. Effective time management and organization skills can enable you to achieve goals, manage stress, maintain a healthy work-life balance, and improve well-being and satisfaction. Time management and organizational skills include such as prioritizing, goal setting, multi-tasking, decision making and collaboration.
- **Sales Skills:** Sales skills are vital for salespeople and valuable for entrepreneurs, as they need to know how to sell their businesses to potential customers and investors. Developing sales skills can help entrepreneurs make sales, pitch ideas, negotiate, and create great relationships with their customers, investors, and stakeholders to build a strong business. Sales skills include such as business acumen, negotiation, relationship-building, data analysis and social selling.
- **Stress Management Skills:** Leading a business can take a toll on an entrepreneur's well-being. They need to know how to efficiently manage and cope with stress for themselves, their employees, and their business. Stress management skills allow leaders to maintain good physical and mental health, enhance personal and professional relationships, and improve the overall quality of life. Stress management skills include such as meditation, positive thinking, mindfulness, sleep hygiene and exercise.

1.15 Ways to Develop Entrepreneurial Skills

The ways to develop entrepreneurial skills in an individual are as under:

- **Define goals:** Establish your business objectives, strengths, weaknesses, and what you want to achieve.
- **Learn:** Podcasts, books, and seminars can be great sources of information to enhance your skills.

- **Take online courses:** Online courses are an excellent way to boost the skills you want to develop.
- **Look for a mentor:** Mentorship can make a significant impact on your life and career; seek mentorship from successful leaders to enhance your skills.
- **Work hard:** Develop a strong work ethic and be consistent in your efforts to grow.
- **Be adaptable:** Stay open to change and embrace new ideas and opportunities as they arise.
- **Foster a growth mindset:** Focus on continuous learning and seek out new opportunities to develop your skills.

1.16 Advantages of Entrepreneurship

The advantages are as follows:

- **Growth Mindset:** As the business expands, one must constantly adapt to market shifts and overcome new challenges. This cultivates a growth mindset that encourages entrepreneurs to keep learning, progressing, and seeking opportunities for personal and professional growth.
- **Unique Experiences:** No two days are the same in the life of an entrepreneur. There is always a to-do list with new tasks and demands that will keep them on their toes. Moreover, entrepreneurs meet new people, gain deeper insights into topics, and expand their knowledge.
- **Flexibility:** The traditional trappings of a regular job can be frustrating for many. On the other hand, entrepreneurship allows one to avoid a fixed schedule and create their own routine. What is more, having flexible work days can significantly improve both physical and mental well-being.
- **Work-Life Autonomy:** Entrepreneurs can set their own boundaries in terms of managing their workload. This gives them the time to prioritize personal goals and get back to work when needed. Besides, this autonomy also ensures that they remain motivated, invested, and involved in their work.
- **Innovation:** All entrepreneurs aim to develop products or services that meet consumer requirements. Being at the forefront of innovation, entrepreneurs improve their standard of living by introducing new technologies and business models.
- **Positive Impact:** Entrepreneurship is a great tool for initiating positive change in the world. Socially responsible businesses may be more attractive to customers while positively impacting society.

- **Freedom to Choose People:** Entrepreneurs can choose clients, employees, and business partnerships they want to pursue. In addition, they have complete control over who they work with and how they want to build the company culture.
- **Independence:** Entrepreneurs are their own bosses and completely control business operations. Besides, they also have the freedom to make their own decisions and tailor the work environment as per their vision.
- **Job Opportunities:** A growing business will create job opportunities to hire employees across various company segments. This benefits both the employees and the company while driving economic growth.
- **Managerial Skills:** First-hand experience as an entrepreneur can help one identify and develop managerial abilities. This may include enhanced leadership skills, business knowledge, and time management, among other things.
- **Unlimited Income:** In a traditional job, the income is limited to the company's salary and benefits. In entrepreneurship, a good business idea and execution leads to a high earning potential where entrepreneurs define their own income.

1.17 Limitations of Entrepreneurship

Entrepreneurship requires the ability to handle and judge potential risks. The main limitations of entrepreneurship are as follows:

- **Undefined income:** Entrepreneurship does not ensure a fixed and stable income like a full-time job. Entrepreneurs have no fixed income, and income is not guaranteed at the initial stage of business.
- **Long Working Hours:** Apart from uncertain income, entrepreneurs do not have any fixed working hours.
- **Risk of Failure:** The initial stages of an entrepreneur's journey can be very challenging. There are risks that business strategies may not work, leading to losses in the business.
- **Lack of investors:** It is very difficult to earn the trust of investors, and hence investors must start the business in debt.
- **More stress:** Running a business from the beginning requires a lot of effort. An entrepreneur must take care of finance, legal issues, sales, manpower, and other factors to work. All these factors cause additional stress and can result in poor physical and mental health.

1.18 Role of Entrepreneurship in Economic Development

The important role of entrepreneurship in the economic development of country is described as follows:

- **Raising the Standard of Living:** One of the most significant benefits of entrepreneurship in economic development, is that it raises the standard of living. By creating new businesses and jobs, entrepreneurship improves the quality of life for both individuals and communities, enabling paths for wealth creation. Entrepreneurship enhances employability, which in turn drives economic competitiveness. The result is better products and services, and ultimately, happier consumers.
- **Creation of New Jobs:** Entrepreneurship is a significant source of job creation. By starting new businesses, entrepreneurs create employment opportunities for themselves and others. This helps to reduce unemployment rates and improve the overall economic well-being of the community. According to the Global Entrepreneurship Monitor, entrepreneurship is responsible for creating millions of jobs worldwide. This is particularly important in developing countries, where job creation is critical for economic growth and poverty reduction.
- **Eliminate Poverty:** Entrepreneurship can help to eliminate poverty in local areas. By creating new businesses and jobs, entrepreneurship provides opportunities for people to improve their financial situation. This is particularly important in developing countries, where poverty is often widespread. Entrepreneurship provides a way for people to improve their economic well-being, which can ultimately lead to social change and overall development.
- **Community Development:** Entrepreneurship is important as it also plays a critical role in community development. By creating new businesses, entrepreneurs contribute to the economic vitality of their communities. This can lead to increased investment in the community, which can result in improved infrastructure, services, and amenities. Entrepreneurship can also help to foster a sense of community pride and ownership, which can contribute to the overall development of the community.
- **Economic Independence:** Entrepreneurship provides economic independence for individuals, towns, and countries. By creating new businesses, entrepreneurs can generate income and contribute to the overall economic well-being of their community. This is particularly important for developing countries, where economic power is often concentrated in the hands of a few large corporations. Entrepreneurship provides an

opportunity for individuals and small businesses to compete in the market, which can lead to increased economic diversity and stability.

- **Competitiveness:** New startups entering the market drive innovation and competitiveness. They challenge existing businesses to improve their products and services, which ultimately benefits consumers. The importance of new startups cannot be overstated, since they provide new job opportunities and contribute to overall economic growth. They are essential for creating a dynamic and vibrant business environment, which fosters innovation and growth. Without new entrants, existing firms are not motivated to innovate and can increase prices due building a large-scale monopoly in the industry.
- **Capital Investment:** Entrepreneurship encourages capital investment in both cities and countries. By creating new businesses, entrepreneurs attract investment from both local and foreign sources. This can even unlock their ability to access different labour markets and even enter foreign markets further down the line. This investment can contribute to the overall economic growth of the community, as well as provide new opportunities for entrepreneurs and job seekers. Capital formation is essential for creating a sustainable and thriving business environment.
- **Drive Market Innovation:** Innovative entrepreneurship is the driving force behind market innovation. Entrepreneurs are known for their ability to identify gaps in the market and come up with solutions to fill those gaps. This not only benefits the entrepreneur but also the entire economy. By focusing on business innovation, such as developing new solutions, products/services, or improving existing ones, entrepreneurs increase competition, leading to a decrease in prices and an increase in quality. Moreover, innovative entrepreneurs are also responsible for keeping costs low, which benefits the overall economy. By introducing new and more efficient production methods, entrepreneurs can decrease the cost of production. This leads to an increase in supply, which in turn leads to an increase in exports. This is particularly important for developing countries that rely heavily on exports for their economic growth.
- **Maximum Use of Resources:** Entrepreneurs are also responsible for the optimal use of resources. By identifying new business opportunities and introducing new production methods, entrepreneurs can create more efficient systems for utilizing resources. This not only benefits the entrepreneur but also the entire economy, as it leads to a decrease in waste and an increase in productivity. Furthermore,

entrepreneurship can also lead to the creation of new markets. By introducing new products or services, entrepreneurs can create demand where none existed before. This can lead to the development of entirely new industries, which can further contribute to the overall development of the economy.

The entrepreneurial activity is positively correlated with economic growth. According to the European Research on Management and Business Economics, countries with high levels of entrepreneurial activity tend to have higher rates of economic growth. Moreover, entrepreneurship also plays an important role in promoting balanced regional development. By creating new businesses and job opportunities in areas that were previously underdeveloped, entrepreneurship can help to reduce regional disparities and promote overall development.

1.19 Self-Check Exercise

1. Write short note on entrepreneurship.
2. Define entrepreneur.
3. Define entrepreneurship.
4. Write a short note on motives of entrepreneurship.
5. What is the role of entrepreneurship in Indian society? Discuss in brief.

1.20 Summary

Entrepreneurship is a concept that involves taking on financial risks and new opportunities to create products or services. It is typically a sole proprietor, partner, or owner of most shares in an incorporated venture, responsible for deciding what, how, and how much of a good or service will be produced, providing risk capital, and monitoring and controlling business activities. Entrepreneurs possess qualities such as independence, achievement, opportunity-grabbing, information seeker, belief in quality and efficiency, systematic planning, optimism, eager learners, urge to build, initiative, persistent, risk-taker, goal setter, hardworking, aggressive catalyst, dynamic and visionary, persuasive and networker, independent and self-confident, well-versed in managerial skill, strong team builder, high intellectual levels, and an enterprising person spirit. Entrepreneurial organizations are structures consisting of a large operational unit with a few individuals in top management, focusing on developing and managing a business enterprise. Entrepreneurial management involves the skills necessary to successfully develop and manage a business enterprise. The main motives for individuals to become entrepreneurs include change, freedom, flexibility, work anywhere, curiosity, and ambition. Entrepreneurship in India has been a significant source of success for many Indian businesses, but it depends on continued economic liberalization and the government's ability to tackle risks such as terrorism, political corruption, and focusing on the urban rich.

1.21 Glossary

- **Enterprises:** These are typically large, complex organizations with various divisions and departments managed by a board of directors or an executive team.
- **Entrepreneur:** It is an individual who starts their own business based on an idea they have or a product they have created while assuming most of the risks and reaping most of the rewards of the business.
- **Entrepreneurship:** It is when an individual who has an idea act on that idea, usually to disrupt the current market with a new product or service. Entrepreneurship usually starts as a small business but the long-term vision is much greater, to seek high profits and capture market share with an innovative new idea.

1.22 Answers to Self-Check Exercise

1. For answer refer to the section number 1.4.
2. For answer refer to the section number 1.2.
3. For answer refer to the section number 1.6.
4. For answer refer to the section number 1.11.
5. For answer refer to the section number 1.13.

1.23 Terminal Questions

1. Define entrepreneurs. Discuss the various types of entrepreneurs.
2. What do you mean by entrepreneurship? Discuss the functions and characteristics of entrepreneurship.
3. Describe the importance and role of entrepreneurship in the economic development of a country.
4. Define entrepreneurship. Elaborate the process.
5. What are the advantages and limitations of entrepreneurship? Discuss

1.24 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
- Gupta, CB and P Srinivasan, Entrepreneurship Development, Sultan Chand and Sons, New Delhi
- Arya, K. (2016). Entrepreneurship: Creating and Leading an Entrepreneurial Organization. Pearson.
- Hisrich, R. D., Shepherd, D. A. & Peters, M. P. (2016), Entrepreneurship, McGraw-Hill Education.

- Galindo, C. R. (2018). The Entrepreneur's Guide to Winning: 7 Arts You Need to Master to Win the Game of Business. Create Space Independent Publishing.
- Ramachandran, K. (2014). Entrepreneurship Development: Indian cases on Change Agents. Tata McGraw Hill.
- Robinson, P. J. (2017). A Guide for Writing Your Business Plan. Independently published
- Chandra, Prasana: Project Planning Analysis, Financing Implementation and Review. TATA McGraw Hill, New Delhi.
- Patel, Bhavesh M., Project Management, Vikash Publishing House Pvt. Ltd., New Delhi.
- Pitale, R.L. Project Appraisal Techniques, Oxford and IBH.
- Timothy, D.R. and Swell W.R. Project Appraisal and Review, McMillan, India.

Lesson 2

Entrepreneurship Development

Structure

2.0 Introduction

Entrepreneurship development is the means of enhancing the knowledge and skill of entrepreneurs through several classroom coaching and programs, and training. The main point of the development process is to strengthen and increase the number of entrepreneurs. This entrepreneur development process helps new firms or ventures get better in achieving their goals, improve business and the nation's economy. Another essential factor of this process is to improve the capacity to manage, develop, and build a business enterprise keeping in mind the risks related to it. In simple words, the entrepreneurship development process is about supporting entrepreneurs to advance their skills with the help of training and coaching classes.

It encourages them to make better judgments and take a sensible decision for all business activities.

2.1 Learning Objectives

After studying this lesson, students will be able to understand:

- The definitions, meaning, and characteristics of entrepreneurship development.
- The objectives, need, importance and process of entrepreneurship development.
- The types of entrepreneurship development.
- The meaning, definitions and need of entrepreneurial development programme.
- The objectives, phases, and importance of entrepreneurial development programme.

2.2 Definitions

- Entrepreneurship Development is the process of developing the infrastructure of public and private policies and practices that foster and support entrepreneurship.
- Entrepreneurship Development could be defined as a process of enhancing the capacity to develop, manage and organize a business venture while keeping in mind the risk associated with it.
- Entrepreneurship is the ability to identify and coordinate productive resources to materialize a business at the service of an innovative idea. Entrepreneurial development promotes competition, variety, selection, cooperation, transformation, evolution, scientific progress, and knowledge, among other positive factors for a country.

2.3 Meaning of Entrepreneurship Development

Entrepreneurship Development is a technique designed to enhance the entrepreneurial skills of professionals. It involves the inculcation, refinement, and grooming of entrepreneurial skills within someone to establish and successfully run an enterprise. Many young people in developing countries need access to modern education on business development and the use of Information and Communication Technologies (ICTs). This makes it hard for new entrepreneurs to compete in the job market and contribute to their country’s economic development. Entrepreneurship Development gives people the encouragement and business skills to help them establish a successful enterprise. It is all about building a business from zero by developing new ideas and turning them into profitable businesses.

2.4 Characteristics of Entrepreneurship Development

The following are the characteristics of entrepreneurship development:

- **Innovation:** Entrepreneur need to be innovative. The essence of entrepreneurship is innovation. Innovation may take place in the following forms viz., the introduction of a new product in the market, the installation of new production technology, entry of specific product, the discovery of a new source of raw material, etc. In view of changing taste, preferences, etc., of the consumers, from time to time, entrepreneur undertakes research and development to manufacture products to satisfy the consumers' needs.

- **Economic activity:** To satisfy human wants and as well as in exchange earn a better livelihood, an entrepreneur manufactures new products or modify the existing products as per the needs, preferences and demands of the consumers. For this purpose, he undertakes a systematic plan activity by using his skills, knowledge and experience. For this reason, entrepreneurship is considered as an economic activity.
- **Organisation building:** Entrepreneurship is an activity of organising various factors of production and various resources such as financial, physical and human resources. By considering place utility, time utility, form utility, etc., entrepreneur must assemble different factors j of production and resources under one roof for producing new products.
- **Creative activity:** Innovation is a process of creating something new and creativity is most important for innovation. Therefore, innovation should be strongly supported by creativity, Innovation and creativity are supplement to each other. Introducing creativity in the production process is a challenging task before the entrepreneur. Hence, creativity is an essential element of entrepreneurship.
- **Managerial skill and leadership:** The entrepreneur who has strong passion of doing or creating something new rather than just to earn profit will become a successful entrepreneur. Managerial skills and leadership are the most important features of successful entrepreneur. Other skills are not considered so important. Entrepreneur must be a good leader and manager of the groups working under him.
- **Skilful management:** The efficient and skilful management of the organisation is an important quality of entrepreneurship. With the help of professional management and skilled managers, entrepreneurship becomes easy and successful activity. The success of any entrepreneurship depends on its skilful management.
- **Risk-taking:** An entrepreneur must undertake many risks including fall in prices, changes in fashions, earthquake, etc. All these risks cannot be insured with insurance companies. A risk which cannot be insured against and measured is called uncertainty. Entrepreneur buys factors of production at certain prices to combine their contributions

into the products and then sells those products at uncertain prices in future. Thus, entrepreneur is a risk-bearing agent of production.

- **Gap filling function:** Gap filling is considered as the most important feature of entrepreneur. It is the job of entrepreneur to find the gap and fill it or make up the deficiencies which always exist in the knowledge about the production function. Entrepreneur must have all the solutions of the problems.

2.5 Objectives of Entrepreneurship Development

The objectives of the entrepreneurship development are as follows:

- Develop and strengthen entrepreneurial traits
- Employment Generation
- Boosting industrial development
- Developing urbanization
- Select and formulate the project
- Learning the art of Product development
- To know the source of help and support for a startup venture
- Industry Exposer Learning
- Entrepreneurial incubator culture
- Fundraising Awareness
- Sustainability and growth

2.6 Need for Entrepreneurship Development

The need for the entrepreneurship development is as under:

- Increase in National production
- Balanced development in all areas
- Reinvestment of profit for the welfare of the areas of profit generation
- The development provides motivation and human resource
- Entrepreneurial awareness
- Increase in employment opportunity
- Increasing productivity
- Optimum use of local resources
- Continued innovation in technology and managerial practices
- Improving international competitiveness

2.7 Importance of Entrepreneurship Development

The benefits of entrepreneurship development are as under:

- **Drives Innovation and Creativity:** Innovation and creativity are essential for any economy to flourish and compete in the global marketplace. Giving people the tools and resources to start businesses allows economic innovation and creativity. This can lead to new products or services that can improve consumers' lives and make businesses more efficient.
- **Boosts Economic Growth:** Entrepreneurship is critical for economic growth. It leads to developing new products and services, stimulating investment, increasing productivity, and driving competitiveness. A study by the Global Entrepreneurship Monitor found that countries with higher rates of entrepreneurship tend to have higher economic growth rates.
- **Creates Jobs and Improves Wages:** In many cases, the entrepreneurial culture is a source of work for unemployed people, who can generate more money by producing their ideas. Likewise, innovative ventures require new jobs with unique skills. These are entry-level jobs where new staff need to be trained and gain experience. On the other hand, many business ventures aim to supply innovative products and services that facilitate the work of large industries, creating more jobs for people who want to offer their labour or specialized knowledge. Finally, in terms of salaries, the importance of entrepreneurship lies in increasing the income of the people who create these new innovative businesses.
- **Improves the Quality of Life:** Entrepreneurship is a source of development, be it economic, technological, or social. One of the most significant benefits of start-ups is that they aim to improve people's lives since they offer new possibilities through innovative products or services. For example, large technology companies such as Apple, Facebook, YouTube, Google, and Microsoft were born as digital start-ups and today help simplify many tasks of daily life. On the other hand, social enterprises also improve the community's quality of life and excellent stability.
- **Promotes Knowledge and Research:** The meaning of entrepreneurship is synonymous with innovation. Therefore, investment in research on science and technology is essential for the development of ventures. In other words, the more one knows about a subject; the more one will be able to master and take advantage of the skills necessary to execute business ideas. On the other hand, to create any business venture, it is necessary to have at least a basic notion of how businesses work, as well as an understanding of how a company's structure, climate, and organizational culture work. In conclusion, one of the essential benefits of entrepreneurship development is that it encourages the education of entrepreneurs and investment in research.

- **Increases Self-esteem and Confidence of Entrepreneur:** Beyond the economic benefits of a business venture, it is essential to take into account that, personally, it represents a better level of self-esteem for the entrepreneur and a boost of confidence to achieve their goals. On the other hand, it is also important to remember that personal ventures must be something their creator is passionate about and not only see it with an economic advantage. In this way, innovative entrepreneurship's success will help recognize what it is capable of through effort and hard work, in addition to becoming a source of well-being and a stimulant for the lives of the people who develop it.
- **Job Satisfaction:** Although satisfaction is a feeling you can achieve in all jobs, nothing compares to what a person feels when they see their entrepreneurial idea materialize. A business venture requires a significant commitment to explore new ideas, work for hours, perfect your strategies and try to reach an outcome that meets your initial expectations. Entrepreneurship development helps you set clear expectations for your work and plan the tasks to achieve your goals.

2.8 Process of Entrepreneurship Development

Entrepreneurship development is a strategic process which incorporates various tools that concentrate on skill development of the individual in an array of ways. The different steps of entrepreneurial development process are given as under:

- **Step-1-Setting an Objective of the Program:** Before starting the entrepreneurship development program, it is imperative to set a clear objective and draft a plan as to what the program is aiming to accomplish. As someone who is organising this program, having a clear direction and objectives play an important role in making it a success. The absence of both will result in loss of time, money, effort and most of all, valuable potential of the individual.
- **Step-2-Finding the Right Mentors/Training Professionals:** The entrepreneurship development program's main purpose is to help aspiring entrepreneurs furnish their talents and learn the intricacies of operating a business. For, this you will require trained professionals who are experienced in this domain and can impart their own life lessons to those who are just starting or facing difficulties. Seek help from established entrepreneurs around you and ask them if they can conduct a session or find those who have pursued a professional qualification in this field and enrol them for the session.
- **Step-3-Identify Potential Local Talents and Markets:** The entrepreneurship development process has been efficient and effective in the local markets and on the local entrepreneurs who know about it. If you have planning to conduct sessions and programs

related to this, the best way to begin is to reach out to local markets. These localities can understand and absorb the knowledge more quickly and can apply it in the current scenario, the effects of the program can easily and quickly be seen within the community.

- **Step-4-Choosing the right location to conduct the program:** For any successful event, the choice of location and resources plays an imperative role. These developmental programs must be launched in the areas where the program can attract many people, who want to take advantage of the program.
- **Step-5-Tie Up with Institutions:** To give a real-world experience to the aspirants and cater to people in various fields, many a time these entrepreneurship development programmes involve tie-ups with several NGOs, private institutions and universities. This will help you organise better set-ups for the entrepreneurs to meet, communicate and exchange their ideas.
- **Step-6-Assess Effectiveness and Seek Feedback:** At the conclusion of your entrepreneurship development session, ensure that you ask people for their honest feedback and how it could have been better. Analyse how effective it has been to help budding entrepreneurs find solutions to their issues. Be open to constructive criticism and try to incorporate important pointers into the next program.

2.9 Types of Entrepreneurship Development

Entrepreneurship development plays a vital role in the success and growth of small businesses and startups. It is the process of identifying and nurturing individuals with the potential to become successful entrepreneurs. Four types of entrepreneurship development are:

- **Small business:** Small business owners may focus on a single product or service. They use their savings to start their business and only make money if they are successful in their venture. According to Small Business Administration (SBA), more than 99% of all U.S. businesses are considered small businesses, and most of them are entrepreneurial ventures.
- **Scalable startups:** They attempt to grow quickly with multiple offerings to be profitable. They aim at gaining investors which allows them to grow and scale up. As the name suggests, they are scalable i.e. they have the potential to keep increasing their revenue while keeping their incremental costs at a minimum. Uber, Airbnb, and Basecamp are present-day examples of scalable startups.
- **Large companies:** They may look for intrapreneurs who are willing to take risks within their organization or create entirely new ones. These intrapreneurs are employees of some big company but see the potential to spin off new products or services that take on a life of their

own. One of the great intrapreneurship examples is DreamWorks Animation, the media behemoth that gave us “Madagascar” and “Kung Fu Panda”

- **Social entrepreneurs:** They are entrepreneurs who use their skills to bring about positive change in local communities by solving societal problems through sustainable solutions. Bill Drayton is recognized as one of the pioneering social entrepreneurs.

2.10 Meaning of Entrepreneurial Development Programme

As the term itself denotes, EDP is a programme meant to develop entrepreneurial abilities among the people. In other words, it refers to inculcation, development, and polishing of entrepreneurial skills into a person needed to establish and successfully run his / her enterprise. Thus, the concept of entrepreneurship development programme involves equipping a person with the required skills and knowledge needed for starting and running the enterprise. Entrepreneurial Development Programme (EDP) refers to a programme which is formulated to assist the individuals in reinforcing their entrepreneurial motives, and attaining competencies and skills which is essential for performing an entrepreneurial role successfully.

2.11 Definitions

- **Small Industries Extension and Training Institute (SIET 1974), now National Institute of Small Industry Extension Training (NISIET), Hyderabad** defined EDP as “an attempt to develop a person as entrepreneur through structural training. The main purpose of such entrepreneurship development programme is to widen the base of entrepreneurship by development achievement motivation and entrepreneurial skills among the less privileged sections of the society.”

- **N. P. Singh,** “Entrepreneurship Development Programme is designed to help an individual in strengthening his entrepreneurial motive and in acquiring skills and capabilities necessary for playing his entrepreneurial role effectively. It is necessary to promote this understanding of motives and their impact on entrepreneurial values and behaviour for this purpose.” Now, we can easily define EDP as a planned effort to identify, inculcate, develop, and polish the capabilities and skills as the prerequisites of a person to become and behave as an entrepreneur.

- EDP can also be defined as a pre-defined process that recognizes, inculcates, designs and refines the skills and proficiencies of an individual to establish his own enterprise. In recent times, EDP has become a professional task which extensively encourages the development of funded and private businesses. The programme is meant to grow entrepreneurial aptitudes among people.

2.12 Need for Entrepreneurial Development Programme

The entrepreneurs possess certain competencies or traits. These competencies or traits are the underlying characteristics of the entrepreneurs which result in superior performance and which distinguish successful entrepreneurs from the unsuccessful ones. Then, the important question arises is: where do these traits come from? Or, whether these traits are in born in the entrepreneurs or can be induced and developed? In other words, whether the entrepreneurs are born or made? Behavioural scientists have tried to seek answers to these questions.

A well-known behavioural scientist David C. McClelland (1961) at Harvard University made an interesting investigation-cum-experiment into why certain societies displayed great creative powers at periods of their history? What was the cause of these creative bursts of energy? He found that 'the need for achievement (n' ach factor)' was the answer to this question. It was the need for achievement that motivates people to work hard. According to him, money- making was incidental. It was only a measure of achievement, not its motivation.

To answer the next question whether this need for achievement could be induced, he conducted a five-year experimental study in Kakinada, i.e. one of the prosperous districts of Andhra Pradesh in India in collaboration with Small Industries Extension and Training Institute (SIET), Hyderabad.

This experiment is popularly known as 'Kakinada Experiment'. Under this experiment, young persons were selected and put through a three-month training programme and motivated to see fresh goals.

One of the significant conclusions of the experiment was that the traditional beliefs did not seem to inhibit an entrepreneur and that the suitable training can provide the necessary motivation to the entrepreneurs (McClelland & Winter 1969). The achievement motivation had a positive impact on the performance of entrepreneurs. In fact, the 'Kakinada Experiment' could be treated as a precursor to the present day EDP inputs on behavioural aspects. In a sense, 'Kakinada Experiment' is considered as the seed for the Entrepreneurship Development Programmes (EDPs) in India.

The fact remains that it was the 'Kakinada Experiment' that made people appreciate the need for and importance of the entrepreneurial training, now popularly known as 'EDPs', to induce motivation and competence among the young prospective entrepreneurs. Based on this, it was the Gujarat Industrial Investment Corporation (GIIC) which, for the first time, started a three-month training programme on entrepreneurship development. Impressed by the results of GIIC's this training programme, the Government of India embarked, in 1971, on a massive programme on entrepreneurship development. Since then, there is no looking back in this front.

By now, there are some 686 all-India and State level institutions engaged in conducting EDPs in hundreds imparting training to the candidates in thousands.

Till now, 12 State Governments have established state-level Centre for Entrepreneurship Development (CED) or Institute of Entrepreneurship Development (lED) to develop entrepreneurship by conducting EDPs. Today, the EDP in India has proliferated to such a magnitude that it has emerged as a national movement. It is worth mentioning that India operates the oldest and largest programmes for entrepreneurship development in any developing country. The impact of India's EDP movement is borne by the fact that the Indian model of entrepreneurship development is being adopted by some of the developing countries of Asia and Africa. Programmes like India's EDPs are conducted in other countries also, for example, 'Junior Achievement Programme' based on the principle of 'catch them young' in USA and 'Young Enterprises' in the U. K.

2.13 Objectives of Entrepreneurial Development Programme

The objective of Entrepreneurial Development programme is:

- To Develop Entrepreneurial qualities and habits among the upcoming youth via the help of proper training and expert counselling.
- To search and identify the best existing and upcoming business ideas and opportunities.
- Motivating and guiding various individuals for launching their own new businesses and startups. Thus, becoming a contributor to the economy.
- To reach risk mitigation to the youth of the nation.
- Provide and conduct various programmes to spread the idea of Entrepreneurship in rural areas and villages.
- To generate employment and self-employment with the help of Entrepreneurship and the growth of small-scale businesses.
- To inform about various schemes launched by various Government (central, state or regional governmental bodies) and about various taxes put on enterprises.

2.14 Phases of Entrepreneurial Development Programme

All the EDPs mainly consist of three phases, which are explained as follows:

Phase-1-Pre-Training Phase: This step can be considered as the introductory phase in which the entrepreneurship development programmes are launched. A wide spectrum of activities is performed in this phase arc described below:

- Identification of suitable location where the operations can be initiated like a district.

- Selection of an individual as a course coordinator or project leader to coordinate the EDP activities.
- Organisation of basic infrastructural facilities related to the programme.
- Conducting the environmental scanning or industrial survey to look for better business opportunities.
- Developing various plans associated with the programme, like:
    a. Promotional activities by using electronic or print media, posters, leaflets, etc.
    b. Contacting business experts, different agencies, NGOs that can become a part of the programme, directly or indirectly.
    c. Printing the application forms and availing them in different locations with the instructions.
    d. Establishing selection committee for screening of candidates.
    e. Preparing budget and getting it approved from the management and arranging other activities which are related to the programme.
    f. Arranging and deciding the need-based elements in the syllabus of training programme and to contact guest faculties for the training session.
- Looking for the assistance of various agencies such as DICs, banks, SISI, NSIC, DM and so on.
- Conducting industrial motivational campaigns to increase the number of applications.

Phase-2-Training Phase: The main function of any EDP is to impart training to future entrepreneurs and guiding them for establishing the enterprise. The normal duration of the entrepreneurship development programme is 4-6 weeks and it is usually a full-time course. The objectives, training inputs and the centre of focus are explained in the programme design. Commonly, it is considered that the trainees do not have enough information about the change because of which new programme is prepared. Each trainee should appraise himself at the termination of the training programme to have a clear view about his/her future endeavours. Business opportunity guidance, information and project planning inputs, technical inputs. Guiding for enabling business opportunities. information and project planning and technical opinions. Successful and profitable operation of enterprise. Industrial exposure Performing profitable and successful operations, exposure various industrial knowledge. Enterprise management, first-hand knowledge of factory layout, business sites, etc. Information related to factory layout, plant location, organisation management and so on. Management inputs, plant visit/in-plant training Management suggestions industrial visit or training.

Phase-3-Post-Training Phase: This phase is also referred as the phase of follow-up assistance. In this phase, the candidates who have completed their programme successfully are provided post-training assistance. This phase is very important as after the completion of training programme, most of the entrepreneurs face a lot of hardship in the business plan implementation. Thus, with the help of various counselling sessions, the training organisations try to extend their support to trainees. Members like State Financial Corporation, commercial banks, training institutions and District Industries Centre constituted all together to assist the entrepreneurs based on mentioned goals:

- To assist trainees in a meaningful manner so that trainees can realize their business plan.
- To analyse the development made by trainees in the project implementation.
- To evaluate the post-training approach.
- To provide escort services to the trainees with the help of various promotional and financial institutions.

Commonly, these follow-up action meetings are conducted after every three years of training completion and the tools used for the follow-up are:

- Postal questionnaires.
- Telephonic follow-up.
- Individual contact by the trainer.
- Team meetings.

Several government and private institutions are providing assistance in India to entrepreneurs. Some of them are listed below:

- Small Industries Development Organisation (SIDO),
- Commercial Banks,
- National Alliance of Young Entrepreneurs (NAYE),
- National Institute for Entrepreneurship and small Business Development (NIESBUD),
- Entrepreneurship Development Institute of India (EDI),
- India Investment Centre (LIC),
- Small-scale industrial Development Bank of India (SIDBI), and
- Technical Consultancy Organisation (TCO).

2.15 Importance of Entrepreneurial Development Programme

The importance of EDP is as follows:

- **Formation of Employment Opportunities:** Entrepreneurial development programmes generate employment opportunities in the developing and under-developed countries. It assists and encourages individuals to establish their own business and enable them to become self-employed. By setting-up. several business enterprises, EDP also creates abundant job opportunities for other people.

- **Provides Adequate Capital:** A large amount of capital is required to set-up a business enterprise. This financial assistance is provided by various EDP agencies. EDPs instruct the development banks such as ICICI, IDBI, IFCI, SIDCs, etc., to take initiative in promoting entrepreneurship.
- **Proper Utilization of Local Resources:** New entrepreneurs utilize the available local resources in the most effective way. This utilization of resources plays an important role in the development of a particular area or region at minimum cost. EDPs guide, educate and teach the entrepreneurs to exploit the local resources efficiently.
- **Increased Per Capital Income:** Entrepreneurs can organise the factors of production and utilize them in the most productive manner by establishing an enterprise. This development leads to increased production, employment and wealth generation. As a result, overall productivity and per capital income of the economy is raised.
- **Improved Standard of Living:** EDPs provide latest technologies and innovative methods to entrepreneurs which helps them to produce large quantity of products at lower cost. This also enables entrepreneurs to exploit the available resources and produce quality products. This automatically leads to improved standard of living.
- **Economic Independence:** EDPs strengthen the entrepreneurs to produce variety of products in large quantities at competitive prices. It also helps an entrepreneur to develop substitutes of imported products which prevents the country from being dependent on other foreign countries. It also saves foreign exchange of the country.
- **Preventing Industrial Slums:** Most of the developed industrial areas are facing problems related to industrial slums. This leads to over burdening of public amenities and affects the health of people adversely. EDPs offers several subsidies, incentives, infrastructural support and financial grants to new entrepreneurs for establishing their businesses, thus, preventing the growth of industrial slums.
- **Reducing Social Tension:** Most youngsters and educated individuals of the society are in the state of social unrest and tension. This social tension restricts them from finding the right direction in their careers. Most of the students feel frustrated about not getting a job after the completion of education. In such situations, EDPs helps people by providing them proper

guidance, assistance, training and support for establishing new enterprises and businesses, therefore, social tension is reduced as they generate self-employment opportunities.

- **Facilitating Overall Development:** EDPs facilitate entrepreneurship which helps in the overall development of the society by producing new products, innovative services, low-cost consumer goods, job opportunities, increasing the standard of living, and overall productivity. This facilitates in the overall development of the economy and the country.

2.16 Self-Check Exercise

1. Define entrepreneurship development.
2. Discuss the meaning of entrepreneurship development in brief.
3. Write a short note on entrepreneurship development.
4. What is need of entrepreneurship development? Describe in brief.
5. Why entrepreneurship development is essential? Write a short note.
6. What do you mean by EDP? Discuss in brief.
7. Define EDP.
8. Describe the objectives of EDP in short.
9. Discuss in brief the phases of EDP.

2.17 Summary

Entrepreneurship development is a central process that aims to enhance the knowledge and skills of entrepreneurs through classroom coaching, programs, and training. Its main objective is to strengthen and increase the number of entrepreneurs, helping new firms or ventures achieve their goals, improve business and the nation's economy. Entrepreneurship development helps individuals develop entrepreneurial traits, employment generation, boost industrial development, develop urbanization, select and formulate projects, learn product development, find help and support for startups, foster an entrepreneurial incubator culture, raise fundraising awareness, and promote sustainability and growth. Needs for entrepreneurship development include increasing national production, balanced development in all areas, reinvestment of profit for profit welfare, providing motivation and human resources, entrepreneurial awareness, increasing employment opportunity, productivity, optimal use of local resources, continuous innovation in technology and managerial practices, and improving international competitiveness. Entrepreneurship Development Programmes (EDPs) are designed to assist individuals in reinforcing their entrepreneurial motives and attaining competencies and skills essential for performing an entrepreneurial role successfully. Several government and private institutions in India provide assistance to entrepreneurs, including the Small Industries Development Organisation (SIDO), Commercial Banks, National Alliance of Young

Entrepreneurs (NAYE), National Institute for Entrepreneurship and small Business Development (NIESBUD), Entrepreneurship Development Institute of India (EDI), India Investment Centre (LIC), Small-scale Industrial Development Bank of India (SIDBI), and Technical Consultancy Organisation (TCO).

2.18 Glossary

- **Entrepreneurship development:** It is the means of enhancing the knowledge and skill of entrepreneurs through several classroom coaching and programs, and training. The main point of the development process is to strengthen and increase the number of entrepreneurs.
- **Entrepreneurship Development Programme:** It is a programme that aims to improve entrepreneurial skills. Through such a programme, the skills needed to properly run a company are learned among individuals. Often, people can have knowledge, but polishing and incubation is necessary that are provided by the EDP.

2.19 Answers to Self-Check Exercise

1. For answer refer to the section 2.2.
2. For answer refer to the section 2.3
3. For answer refer to the section 2.4.
4. For answer refer to the section 2.6.
5. For answer refer to the section 2.7.
6. For answer refer to the section 2.10.
7. For answer refer to the section 2.11.
8. For answer refer to the section 2.13.
9. For answer refer to the section 2.14.

2.20 Terminal Questions

1. What do you mean by entrepreneurship development? Discuss its meaning, characteristics and objectives.
2. Describe the need and importance of entrepreneurship development.
3. Define the ED. What is the process of ED? Discuss.
4. What do you mean by EDP? Discuss the objectives, need and importance of EDP.
5. Describe the phases of EDP in detail.

2.21 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)

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- Ramachandran, K. (2014). Entrepreneurship Development: Indian cases on Change Agents. Tata McGraw Hill.
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- Chandra, Prasana: Project Planning Analysis, Financing Implementation and Review. TATA McGraw Hill, New Delhi.
- Patel, Bhavesh M., Project Management, Vikash Publishing House Pvt. Ltd., New Delhi.
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Lesson 3

Start-ups: An Overview

Structure

3.0 Introduction

Startups are companies or ventures that are focused on a single product or service that the founders want to bring to market. These companies typically do not have a fully developed business model and, more crucially, lack adequate capital to move onto the next phase of business. Most of these companies are initially funded by their founders. Many startups turn to others for more funding, including family, friends, and venture capitalists. Silicon Valley is known for its strong venture capitalist community and is a popular destination for startups, but is also widely considered the most demanding arena. Startups can use seed capital to invest in research and to develop their business plans. Market research helps determine the demand for a product or service, while a comprehensive business plan outlines the company's mission statement, vision, and goals, as well as management and marketing strategies. Startups play a crucial role by driving innovation, creating jobs, and promoting competition. Starting a new business venture can be an exciting and rewarding experience. However, not all startups are created equal, and there are several different types of startups to consider when embarking on an entrepreneurial journey. Understanding the different types of startup businesses can help aspiring entrepreneurs choose the right path for their business idea and increase their chances of success.

3.1 Learning Objectives

After studying this lesson, students will be able to understand:

- The meaning, importance, types, advantages and limitations of startups.
- The factors affecting operations in India and procedure for registration of startups.
- The process of registration, eligibility criteria, and benefits of startups.
- The measures undertaken to promote startup in India.
- The sources of public funding, public funds and status of startup in India.

3.2 Meaning of Startups

"What is a startup?" is the first question comes into the mind of an individual before understanding the meaning of start-ups. It is that it is a new business venture providing services or products to an existing and growing market. A startup is in the first stage of operations and comprises one or more entrepreneurs. The primary aim is to answer market demand by creating new and innovative products or services. While most small businesses might intend to stay small, a startup focuses on fast growth in a designated market. Usually, such companies start as an idea and gradually grow into a viable product, service or platform.

Startups begin with high costs and have limited revenue. Also, they do not have a developed business model and lacks adequate capital to move to the next phase. As a result, these companies seek funding from various sources, such as venture capitalists, angel investors and banks. Investors or lenders might offer additional funds for a share of future profits and partial ownership. Often, these companies use seed capital for investing in research and developing business plans. Research helps them determine the demand for a specific product and a business plan outlines the company's goals and marketing strategies.

3.3 Definitions

- **Neil Blumenthal,** "A startup is a company working to solve a problem where the solution is not obvious and success is not guaranteed."
- **Marry K. Pratt,** "A startup company is a newly formed business with momentum behind it based on perceived demand for its product or service. The intention of a startup is to grow rapidly because of offering something that addresses a particular market gap."
- **Merriam-Webster,** "Start-up means the act or an instance of setting in operation or. motion or a fledgling business enterprise."
- **The American Heritage Dictionary,** "It is a business or undertaking that has recently begun operation."

3.4 Importance of Startups

The importance of startups has been because of following reasons:

- **Innovation:** Startups are often founded by entrepreneurs who are looking to solve a particular problem or create something new. These individuals tend to be highly motivated and innovative, which can lead to the development of new products, services, and technologies that can have a significant impact on society.
- **Job creation:** Startups are important job creators, especially in the early stages of their development. As they grow and scale, they can create even more jobs, both directly and indirectly, by hiring employees, contractors, and service providers.
- **Economic growth:** Startups can contribute to economic growth by creating new markets, increasing competition, and attracting investment. They can also help to revitalize local economies by generating new business activity and creating new opportunities for entrepreneurs and small businesses.
- **Flexibility:** Startups tend to be more flexible and agile than larger companies, which allows them to adapt quickly to changing market conditions and customer needs. This can be a major advantage in fast-paced industries where innovation and speed are critical.
- **Diversity:** Startups often have diverse and inclusive teams, which can lead to more innovative and creative solutions. This is especially important in industries where a lack of diversity has traditionally been a barrier to progress.

3.5 Types of Startups

A startup company's purpose is to create products that target an untapped market or improve the existing one. Before working in a startup, understanding the types of startups is essential and these are as under:

- **Scalable startups:** Often, companies working in the technology domain belong to the scalable startup group and these companies work hard to rapidly grow and achieve a high return on investment (ROI). This type of startup requires extensive market research to determine untapped market opportunities. Some examples of this type of startup are consumer and business apps. This startup model requires external capital to generate demand and ensure company expansion. Scalable startups do this by raising capital from external investors. With the investment they receive, a startup can support growth initiatives and focus on grabbing the target market's attention. A scalable startup is a right choice if a business product or service has an untapped market and offers vast growth potential.
- **Small business startups:** The purpose of a small business startup is longevity rather than scalability. While these businesses have an interest in growth, they grow at their own pace. Business owners usually bootstraps and self-finance these startups. This means that they have less pressure to scale. Some examples of small business startups include hairdressers, grocery stores, travel agents and bakers. Also, many of these startups are family-owned. A small business startup is a right choice if a business plans to hire locals and family members to operate a business or create a sustainable and long-lasting business.
- **Social entrepreneurship startups:** Unlike other types of startups, a social entrepreneurship startup does not focus on wealth generation for the founders. Instead, they build such a business to change the environment and society positively. Some examples of these companies include charities and non-profit organisations. These companies usually scale for doing philanthropy activities. Though they operate like other startups, they do it through donations and grants. A social startup is a right choice if a business plans to create a positive environmental or social impact or if the company has an idea of solving a widespread social problem.
- **Large company startups:** A large company or offshoot startup includes large companies that have been in operation for a long time. Companies that fit into this category start with revolutionary products and quickly become famous. As big businesses are self-sufficient, they grow along with new market demands and trends.

For this reason, it is essential for these companies to keep up with changes to sustain themselves. Backed by support and capital, these offshoot startups focus on diversifying product offerings and plans to reach new audiences. An offshoot startup is a right choice if a business owns a large company or wants to penetrate a new market that is not the business's primary focus.

- **Lifestyle startups:** People who have hobbies and want to pursue their passion can build a lifestyle startup. Often, these business owners desire independence and spend their energy, money and time building a startup. These business owners earn money by pursuing their favourite hobby or activity. Some examples of lifestyle startups include a dancer opening a dance school, an avid traveller starting a touring company or a software developer starting online coding classes. A lifestyle startup is a right choice if a business owner has a hobby they can pursue or is passionate and creative about starting a new business on their hobby.
- **E-commerce startups:** These are online marketplaces that allow customers to purchase products or services from various vendors. Some popular Indian e-commerce startups include Flipkart, Myntra, and Amazon India.
- **Healthtech startups:** These startups use technology to improve the delivery of healthcare services. Some examples of Indian healthtech startups are Practo, Portea, and 1mg.
- **Fintech startups:** These startups use technology to improve financial services and make them more accessible. Some popular Indian fintech startups include Paytm, PhonePe, and Razorpay.
- **Edtech startups:** These startups use technology to improve education and make it more accessible to students. Some examples of Indian edtech startups are Byju's, Vedantu, and Unacademy.
- **Agritech startups:** These startups use technology to improve agricultural productivity and efficiency. Some examples of Indian agritech startups are Ninjacart, DeHaat, and AgroStar.
- **Logistics and delivery startups:** These startups use technology to improve the delivery of goods and services. Some examples of Indian logistics and delivery startups are Delhivery, Rivigo, and Shadowfax.

- **Traveltech startups:** These startups use technology to improve the travel experience for customers. Some popular Indian traveltech startups include Oyo, MakeMyTrip, and Cleartrip.
- **AI and ML startups:** These startups use artificial intelligence and machine learning to create innovative products and services. Some examples of Indian AI and ML startups are Haptik, Niki.ai, and Locus.

3.6 Factors Affecting Operations of Startups

The factors that can affect the operations of a startup are as follows:

- **Location:** The location of a startup can decide its success and failure. To effectively begin operations, a business decides whether they plan to conduct it online, offline or in a store. A startup's location depends on the products or services a company offers. For instance, an all-natural peanut butter company may need a physical store to provide customers with a taste of their product.
- **Legal structure:** Understanding the legal structure that best fits the organisational requirement is essential for building a successful company. A sole proprietorship is ideal for a startup if the owner is a key business employee. A partnership is a good option for companies with over one founder. A startup company can reduce its personal liabilities by registering it as a limited liability company (LLC).
- **Funding:** To begin business operations, a startup requires funds. They can do this by raising capital from crowdfunding or venture capitalist. Entrepreneurs can set up a crowdfunding page, allowing people to donate money. They can even raise money from venture capitalists. Businesses can even focus on small business loans to grow. Often, to qualify and receive funding, a business prepares a detailed business plan and strategy.

3.7 Procedure of starting a Start-up in India

Starting up a business in India can be an exciting and challenging process. Here are some steps that can guide you on how to start a startup in India:

1) **Identify your business idea:** Choose a business idea that you are passionate about and has the potential to succeed in the Indian market. Conduct market research to identify the demand for your product or service.
2) **Create a business plan:** Develop a comprehensive business plan that includes your business idea, target audience, revenue streams, marketing strategies, and financial projections.

3) **Choose a legal structure:** Choose a legal structure that best suits your business needs, such as sole proprietorship, partnership, LLP, or private limited company.

4) **Register your business:** Register your business with the Registrar of Companies (ROC) and obtain a PAN and TAN number from the Income Tax Department.

5) **Obtain necessary licenses and permits:** Depending on the type of business, you may need to obtain licenses and permits from various government departments such as FSSAI, GST, and local municipal corporations.

6) **Set up a business bank account:** Open a separate bank account for your business to keep your personal and business finances separate.

7) **Hire employees:** Hire employees based on your business needs and ensure that you comply with labour laws and regulations.

8) **Build your brand:** Build your brand through marketing and advertising to reach your target audience.

9) **Secure funding:** Secure funding through venture capitalists, angel investors, or government schemes such as Startup India.

10) **Stay compliant:** Stay compliant with all legal and regulatory requirements and maintain proper books of accounts.

Starting a business in India requires determination, perseverance, and hard work. By following these steps, you can set up your startup and take your first step toward entrepreneurship.

3.8 Advantages of Startups

The advantages of startup are as follows:

- **Provides more learning opportunities:** Often, a startup delegates more authority to employees than large corporations. This is because most startups cannot recruit multiple employees with diverse responsibilities. Usually, they hire employees based on a specific skill set but may assign additional responsibilities to compensate for the extra work. This can be an advantage for new professionals who want to learn new things.
- **Provides flexible schedule:** Many startups provide flexible work schedules and some even offer work from home. This is an excellent benefit for professionals who want to maintain a work-life balance. When companies provide a flexible work schedule, it increases work effectiveness because employees can focus on work without getting overwhelmed.
- **Offers unique rewards and benefits:** Working in a startup differs from working in any other type of business. The experience employees gain at a startup differs from other

companies. Some startups may provide catered lunches or nap time to encourage employees to work productively. They provide unique rewards and benefits to keep employees happy.

- **Promotes innovation:** A startup gives employees opportunities to show their expertise and abilities by contributing to their growth or success. Unlike large corporations that follow a streamlined process, employees working in a startup can pitch their ideas directly to the top management. This work environment is ideal for more creative people who want to share their new ideas.
- **Responsibility and opportunities:** More responsibility and opportunities to learn are two. As startups have fewer employees than large, established companies, employees tend to wear many hats, working in a variety of roles, which leads to more responsibility as well as opportunities to learn.
- **Efficiency:** Established companies have high administrative overheads. Startups offer their services in a more efficient, cost-effective and competitive manner. They are likely to be aware of their limitations and tend to focus on their core strengths. This causes them to partner with other small organizations. Customers often benefit with a superior value proposition.
- **Team Culture:** Employees of large corporations get attracted by prestige and big salaries. They easily lose sight of the company's vision, mission and values and the success of its customers. Startup employees form a close-knit community that shares passion, beliefs, and values. They must work together for the good of the company, its customers and the world at large.
- **Personalization:** Startups deliver their products and services with a personal touch. This creates a uniquely personal experience for their customers. Startups also take time to study and understand their customers' business requirements. This allows them to build lasting relationships with specific offerings and responsive solutions.
- **Versatility:** Startup employees multitask and the salesperson could double up as the relationship manager. This adds continuity to customer relationships and enables startups to respond to emergencies. Most startups support learning and have a higher tolerance for mistakes. Both factors enhance the versatility of startup employees.

3.9 Limitations of Startups

The limitations are as under:

- **Increased risk:** This primarily applies to the success and longevity of a startup. New businesses need to prove themselves and raise capital before they can start turning a profit. Keeping investors happy with the startup's progress is critical. The risk of shutting down or not having enough capital to continue operations before turning a profit is ever-present.
- **Compensation:** It takes blood, sweat, and tears to build a company, and long working hours are the norm for startups. The rewards might be low since it takes time to generate revenue and make profits. Some startups give up since it is demotivating to work without proper compensation.
- **Market Access:** Many customers prefer a business that they have worked with over a new startup. Besides it is more expensive to acquire new customers than to retain old ones. Without a customer base, understanding market needs also becomes a real struggle. All these factors combined increase the cost of business development for startups.
- **Team Composition:** Some startups are born out of desperation since the founder could not find or hold on to a job. Such founders often struggle to build a team that the business needs to succeed. A successful startup requires founders/co-directors with complementary personalities and competencies. Even then disagreements can creep in when the going gets tough.
- **Resources:** Growth hacking, cloud computing, and venture capitalism allow startups to gain market entry. Most startups operate on a shoestring budget, against competitors that are well-resourced. It gives the competitors an edge in product development, sales, and marketing. They use that edge to push startups out of the market when they become a threat.
- **Processes:** Startups are flat organizations that lack defined business processes and operational procedures. This exposes them to poor customer service, legal liability, and financial losses. Startups might thus opt to outsource non-core business processes to external service providers. But the high associated costs could form a barrier.
- **Stress:** We did mention that working for a startup is fun, but it could also become very stressful. Low compensation, many responsibilities and long working hours are expected. Add legal prosecution, imminent business failure, and screaming customers and work becomes unbearable.

3.10 Startup India Scheme

Startup India scheme is an important government scheme that was launched on 16th January 2016 with an aim to promote and support the start-ups in India by providing bank finances. It was inaugurated by the former finance minister, Arun Jaitley. Organized by the Department for promotion of industry and internal trade, the major objective of Startup India is to discard some of the restrictive States Government policies which include:

- License Raj
- Land Permissions
- Foreign Investment Proposals
- Environmental Clearances

The Startup India scheme is based majorly on three pillars which are mentioned below:

- Providing funding support and incentives to the various start-ups of the country.
- To provide Industry-Academia Partnership and Incubation.
- Simplification and Handholding.

3.11 Process of Registration for Startup India

A person must follow the below-mentioned steps that are important for the successful registration of their business under the Startup India scheme:

1. A person should incorporate their business first either as a Private Limited Company or as a Limited Liability Partnership or as a Partnership Firm along with obtaining the certificate of Incorporation, PAN, and other required compliances.
2. A person needs to log in to the official website of Startup India where he/she must fill all the essential details of the business in the registration form and upload the required documents.
3. A letter of recommendation, Incorporation/Registration Certificate, and a brief description of the business are some of the essential documents required for the registration purpose.
4. Since the start-ups are exempted from income tax benefits, therefore, they must be recognized by the Department of Industrial Policy and Promotion (DIPP) before availing these benefits. Also, they should be certified by the Inter-Ministerial Board (IMB) to be eligible for IPR related benefits.
5. After successful registration and verification of the documents, you will be immediately provided with a recognition number for your startup along with a certificate of recognition.

3.12 Eligibility criteria for the Startup India scheme

An entity is eligible to apply when:

- It is incorporated as a private limited company or partnership firm or a limited liability partnership in India
- It has less than 10 years of history i.e. less than 10 years have elapsed from the date of its incorporation/registration
- The turnover for all the financial years, since the incorporation/ registration has been less than INR 100 crores

An entity formed by splitting up or reconstruction of a business already in existence shall not be considered a 'Startup'.

3.13 Benefits of Startup India Scheme

After the launch of the Startup India scheme, a new program was launched by the government named the I-MADE program which focused on helping the Indian entrepreneurs in building 1 million mobile app start-ups. The government of India had also launched the Pradhan Mantri Mudra Yojana which aimed to provide financial supports to entrepreneurs from low socioeconomic backgrounds through low-interest rate loans. Some of the key benefits of Startup India are as follows:

- To reduce the patent registration fees.
- Improvement of the Bankruptcy Code ensuring a 90-day exit window.
- To provide freedom from mystifying inspections and capital gain tax for the first 3 years of operation.
- To create an innovation hub under the Atal Innovation Mission.
- Targeting 5 lakh schools along with the involvement of 10 lakh children in innovation-related programs.
- To develop new schemes that will provide IPR protection to startup firms.
- To encourage entrepreneurship throughout the country.
- To promote India as a start-up hub across the world.

3.14 Government Measures to Promote Startup Culture

The following measures have been used by the Government of India to promote the Startup culture in our country:

- As part of the "Make in India" initiative, the government proposes to hold one Start-Up fest at the national level annually to enable all the stakeholders of the Start-up ecosystem to come together on one platform. You can know in detail about the Make in India program on the linked page.

- Launch of Atal Innovation Mission AIM – to promote Entrepreneurship through Self-Employment and Talent Utilization (SETU), wherein innovators would be supported and mentored to become successful entrepreneurs. It also provides a platform where innovative ideas are generated. Relevant details on Atal Innovation Mission AIM are available on the linked page.
- Incubator set up by PPP – To ensure professional management of Government-sponsored or funded incubators, the government will create a policy and framework for setting-up of incubators across the country in public-private partnerships. The incubator shall be managed and operated by the private sector. Read more on Public-Private Partnership on the link provided here.
- 35 new incubators in existing institutions. Funding support of 40% shall be provided by the Central Government, 40% funding by the respective State Government and 20% funding by the private sector for establishment of new incubators.
- 35 new private sector incubators. A grant of 50% (subject to a maximum of INR 10 crore) shall be provided by Central Government for incubators established by the private sector in existing institutions.
- A Startup India Seed Fund Scheme has been implemented with effect from April 1, 2021. The scheme aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry and commercialisation.

3.15 Sources of Public Fund in India

The sources of public funding in India are as follows:

- **Atal Innovation Mission (AIM):** In 2016, NITI Aayog launched this Startup India Scheme, Atal Innovation Mission. The organisation has established this scheme to foster innovation by creating new programmes and policies to support development in several economic areas. This government startup scheme provides a forum for the cooperation of many players in the entrepreneurial sector. Under this startup scheme, AIM grants approx. ₹10 Crores financing to the chosen firms over five years. Emerging organisations in health, agriculture, transportation, education, etc., can apply for this scheme.
- **Startup India Seed Fund Scheme:** The government of India introduced the Startup India Seed Fund Scheme in January 2021, hoping to support relatively early-stage enterprises. With a total budget of ₹945 Crores, it would finance 3600 businesses and 300 incubators. The chosen entrepreneurs under this government startup scheme will receive up to ₹5 Crores in

funding. Startups will get grants of up to ₹20 Lakhs for developing concepts or demonstrations and up to ₹50 Lakhs for growing their goods or services.

- **Startup India Initiative:** As of June 2021, over 50,000 firms have been recognised via this startup scheme in India, which provides tax benefits to entrepreneurs for a little more than five years. Additionally, it created 5.5L jobs too. Within this government startup scheme, the maximum age for most eligible startups is now 7 years and for biotechnology companies is 10 years from the date of establishment. Its numerous benefits make it among the most incredible government-sponsored Startup India Scheme for business owners.
- **Aatmanirbhar Bharat App Innovation Challenge:** Introduced in July 2020, this government startup scheme encouraged Indian startups to collaborate and create solutions made in India — for the benefit of those in the country and worldwide. It also urged tech and startup firms to produce innovative mobile applications for a big cash prize. Apps like Chingari (TikTok equivalent), YourQuote (a writing app), and Koo (Twitter equivalent), were crowned first (₹20L), second (₹15L) & third (₹10L) respectively.
- **eBiz Portal:** eBiz is the first online forum for government-to-business collaboration (G2B). Created by Infosys, this helped modernise the nation and serves as a focal point for communication for all business investors and entrepreneurs in India. This platform has introduced 29 services in five separate Indian states: New Delhi, Tamil Nadu, Andhra Pradesh, Haryana, and Maharashtra. Gradually, the government intends to expand the scheme's services over time.
- **Software Technology Park (STP):** The Software Technology Park (STP) is a system that is 100% export-oriented to increase and export computer software and technical services via physical media or communications infrastructure. Focusing on one business or product, notably computer software, makes the course material distinctive. The initiative of the government's program includes the idea of Export Processing Zones (EPZ) and the suggestion of Science Parks or Technology Parks, which are currently in use worldwide.
- **Dairy Processing and Infrastructure Development Fund (DIDF):** It helps dairy cooperatives maintain their competitive edge for the long-term benefit of farmers. The government announced the creation of the Dairy Processing and Infrastructure Development Fund with a total system expenditure of ₹11,184 Crores. Milk-producing businesses, multi-state milk cooperatives, state dairy federations, NDDB subsidiaries, and so on are eligible for this scheme.

- **MUDRA Banks:** The Micro Units Development Refinance Agency (MUDRA) enhances loan availability and promotes small business growth in rural regions. The primary goal for this government scheme: Assist small Indian businesses that desire to grow. The MUDRA banks offered loans for small businesses that are not farms, microenterprises, or corporations in the amount of up to ₹10 Lakhs. The loan categories are called Tarun, Shishu, and Kishor.
- **Credit Guarantee Fund Trust for Micro and Small Enterprises:** The CGTMSE Startup India Scheme offers zero-collateral business loans to MSME firms, amongst other loans. The goal is to allow businesses to acquire loans at heavily discounted interest rates without requiring collateral. To promote new enterprises and revitalise existing ones, the government has planned to work in conjunction with the SIDBI (Small Industries Development Bank of India) to grant a maximum sum of ₹100 Lakhs.
- **Multiplier Grants Scheme (MGS):** The Multiplier Grants Scheme (MGS), developed by the Department of Electronics and Information Technology, encourages research and development (R&D) partnerships between academics or institutions and the tech industry. The goal for this scheme is to promote and stimulate the development of indigenous products and services. Under this scheme, the government may give up to ₹2 Crore financing to each project, and each project's term is expected to be fewer than two years. The cost for industrial organisations will be ₹4 Crore over three years.

3.16 Sources of Funding for Startups in India

One of the points to consider in all business projects is financing and its sources. Although self-financing and bank financing continues to be fundamental pillars for obtaining financial funding, numerous alternatives have now emerged that provide greater flexibility and better conditions in general for SMEs. These are as under:

- **Bootstrapping:** Bootstrapping is when an entrepreneur starts a company with personal savings, including borrowed or invested funds from FFF and income from initial sales. Self-funded businesses do not rely on the support of investors, public funds, crowdfunding or bank loans. Rather, entrepreneurs must "pull themselves up by their bootstraps" using their capital to launch. For example, a bootstrapped company can take preorders for its product and use that generated amount to build and deliver it.
- **FFF:** Every year, 35-40% of startups receive capital from friends and family. The well-known "Friends, Family and Fools" is, normally, the first source of financing that every

company turns to in its beginnings. This form of financing uses the savings of the entrepreneur and the help of family and friends who trust the business project they are working on.

- **Seed Funding:** Also known as seed financing, company shares are offered to investors so that they acquire a part of the business in exchange for capital. Apart from the FFF, seed capital comes from Angel investors and crowdfunding. Seed capital is one of the sources of financing for a company that provides initial support so that a business can start its operation and consolidate. It is usually oriented towards new companies, offering innovative products or services, incorporating new technology or addressing new market niches.
- **Public Funds:** Public funds are government expenditures focused on public goods and services programs. It refers to any money a public entity receives from appropriations, taxes, fees, interest, or other ROI. The Public Account of India tracks the transaction flows, where the government only serves as a banker. Some examples of public funds in India are –
    - Pradhan Mantri Mudra Yojana (PMMY)
    - Startup India Initiative
    - Startup India Seed Fund Scheme
    - Qualcomm Semiconductor Mentorship Program (QSMP)
    - ATAL Innovation Mission.
    - Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE)
    - Single Point Registration Scheme.
    - Modified Special Incentive Package Scheme (M-SIPS)
- **Crowdfunding:** Crowdfunding is one of the most popular forms of financing companies, startups and projects contributing to the common good. The term can be broken down into two terms, crowd + funding. In such type of funding, you reach out to a crowd who can collectively provide the necessary amount to fund your venture. Crowdfunding is about raising small amounts of money from many different sponsors to get the overall sum you need.
- **Angel Investors:** An “angel” investor offers capital and knowledge to a company or startup through financing. In exchange, you will receive a profit in the future, which usually translates into a shareholding in the company. Angel investments are normally the second financing round for startups with high growth potential.
- **Bank Financing:** There are different bank financing instruments that a company can resort to have the necessary capital flow in its daily operations. However, to receive this type of loan, a company must meet many requirements and conditions before becoming a financing creditor and offer guarantees that guarantee the amount. Finally, the interest rate on this type

of loan is high, so it is advisable to think carefully if a company wants to assume this type of financing.

- **Venture Capital:** Venture capital financing is provided by private funds to companies or ventures with high growth potential. These funds manage and contribute capital from individuals, companies or institutions, investing in innovative companies or startups with great possibilities to be successful. In exchange for this financing, venture capital funds receive a direct shareholding in the company, usually 20-30%. They also usually acquire voting rights in relevant company decisions and a position on the board of directors. Once the success of the projects has been achieved, the venture capital companies withdraw their investment by selling their shares to other interested members or on the stock market if the case arises, obtaining the high returns sought from the beginning.
- **Private Equity:** Another financing possibility for companies with a certain size, traction and growth potential is through private capital sources, also known as private equity. Unlike venture capital, private equity funds tend to invest in all types of companies, with larger amounts and acquiring a greater percentage of the companies where they invest. In addition, these funds tend to invest in a smaller number of companies since they take more into account the risk, they assume with each of them while investing large amounts of capital; therefore, they also expect a higher return on investment than in VCs.
- **Leasing:** A lease is a contract summarising the terms according to which one party agrees to rent an asset another party owns. Instead of opening a loan and putting down a downpayment, startups often lease their initial business equipment. They may even continue to lease after revenue makes buying possible. Equipment leasing has numerous benefits for a startup, from flexibility to liquid cash flow. This rental contract incorporates a purchase option for the lessee to be exercised at the end of the contract. There are four types of leases –
    - Gross lease
    - Modified gross lease
    - Triple net lease
    - Bond lease
- **Factoring or Invoice Discount:** For those companies that sell on credit, there are much more convenient financing options for their needs. The problem is that companies that sell for 30, 60, 90 or more days require capital to continue operating or growing. However, they need the necessary liquidity due to their accounts receivable. With the discount or advance of invoices or factoring, for example, a company can have credit immediately in addition to

reducing the risk of non-payment of its customers. Some online lenders and fintech companies provide factoring services, like IFCI Factors Ltd., SBI Global Factors Ltd., Siemens Factoring Private Limited, Bibby Financial Services (India) Pvt. Ltd., etc. The Reserve Bank of India (RBI) is the regulatory body supervising the factoring business. However, the processes have been streamlined with the advent of online financial services platforms. The costs of this type of operation are reduced, making it a highly recommended option for small and medium-sized companies.

3.17 Status of Startup in India

India has been steadily building its startup ecosystem for the past decade, with the government and private sector working together to create a supportive environment for entrepreneurs. As a result, India has become one of the most dynamic startup hubs in the world, with a growing number of successful startups in a variety of industries. In this article, we will take a closer look at how the startup ecosystem is working in India. The Indian startup ecosystem is built on several key pillars, including government support, access to capital, a growing talent pool, and a supportive culture for entrepreneurship.

One of the most important factors driving the growth of startups in India is the government's focus on supporting entrepreneurship. The government has implemented a range of policies and initiatives aimed at encouraging startups, such as the Startup India campaign launched in 2016. This campaign provides a range of benefits and incentives to startups, including tax exemptions, funding, and support for incubators and accelerators. The government has also established a network of incubators and accelerators across the country to help startups get off the ground. Another important factor contributing to the growth of startups in India is access to capital. While funding was once a major challenge for startups in India, the situation has improved significantly in recent years. There are now a growing number of venture capital firms and angel investors in India, and the country has seen a surge in startup funding over the past few years. According to data from venture intelligence firm Tracxn, Indian startups raised a record $10.1 billion in funding in 2021.

In addition to funding, there is also a growing pool of talent in India, with many highly skilled engineers, developers, and entrepreneurs. Many of these individuals are returning to India after gaining experience and education abroad, bringing with them valuable skills and experience that can help drive the growth of startups in India. Finally, there is a supportive culture for entrepreneurship in India, with a growing number of people seeing entrepreneurship as a viable career path. This is reflected in the increasing number of startup events and conferences taking place across the country, as well as the growing number of co-working spaces and incubators.

One of the most important aspects of the startup ecosystem in India is the role played by incubators and accelerators. These organizations provide startups with access to resources and support, including mentoring, funding, and networking opportunities. Some of the most prominent incubators and accelerators in India include the Indian Angel Network, 500 Startups, and the Microsoft Accelerator. Another important component of the startup ecosystem in India is the presence of venture capital firms. These firms provide startups with the funding they need to grow and expand, as well as valuable advice and support. Some of the most active venture capital firms in India include Sequoia Capital, Accel Partners, and SAIF Partners.

While the Indian startup ecosystem has come a long way over the past decade, there are still challenges that need to be addressed. One of the biggest challenges facing startups in India is the lack of access to early-stage funding, which can make it difficult for startups to get off the ground. There is also a shortage of experienced mentors and advisors, which can make it difficult for startups to navigate the complex world of entrepreneurship. Another challenge facing startups in India is the lack of a robust infrastructure. While there are many co-working spaces and incubators in India, there is still a need for more support in areas such as legal and financial services. This is particularly true for startups operating in highly regulated industries such as healthcare and finance.

Despite these challenges, the startup ecosystem in India is poised for continued growth and success in the coming years. With a supportive government, a growing pool of talent, and a culture that values entrepreneurship, India is well-positioned to become one of the leading startup hubs in the world. The Indian startup ecosystem is facing several challenges despite recording an increase in the number of startups to 84,012 in 2022 from 452 in 2016, according to the Economic Survey Report 2022-23. The challenges include funding, revenue generation struggles and lack of access to supportive infrastructure. The regulatory environment and tax structures have also posed hurdles for startups. To circumvent these challenges, many Indian companies are setting up bases overseas, especially in countries with favourable legal environments and taxation policies, the report highlighted. The process of transferring the entire ownership of an Indian company to an overseas entity, including the transfer of all Intellectual Property and data owned by the Indian company, is called ‘flipping’.

Typically, flipping happens at the early stage of the startup. However, this trend can be reversed with active collaboration with the government-related regulatory bodies and other stakeholders. Further, companies are also exploring ‘reverse flipping’, the survey document stated. “With solution-oriented strategies, startups will continue to be the messengers of India’s entrepreneurial dynamism,” the report read. The Department for Promotion of Industry and

Internal Trade (DPIIT) recognised that startups have created more than 900,000 direct jobs, according to the report. The country has recorded a 64 per cent increase in the average number of new jobs in 2022 relative to the last three years. Further, tier 2 and 3 cities are emerging as hotspots, as they are home to about 48 per cent of our startups. “Lots of startups and innovation are coming from emerging cities like Bhopal,” Arvind Kumar, director-general of Software Technology Parks of India, said at the India International Science Festival held in Bhopal between January 21-24, 2023. “Startups are being envisioned as the spine of new India, as they encourage the youth to become job creators rather than job seekers,” the Economic Survey Report 2022-23 read. India has some 1,000 agritech startups. The sector has seen a spike in private equity investments over the past four years, recording an increase of more than 50 per cent per year to aggregate roughly ₹6,600 crores, the report noted. More than 500 startups are working in the millet value chains. The year 2023 has been declared as the International Year of Millets.

3.18 Self-Check Exercise

1. Define startup.
2. Discuss in brief the importance of startup.
3. What is social entrepreneurship startup? Write a short-note.
4. Describe in short, the factors affecting operations of startups in India.
5. Write a short note on advantages of startups.
6. Discuss in brief the shortcomings of startups.
7. Write a short-note on the process of registration for startups in India.
8. What are the benefits of startup India scheme? Discuss in brief.
9. Discuss in short, the sources of public funding in India.
10. Write a short note on the status of startups in India.

3.19 Summary

Startups are new businesses focused on a single product or service, often lacking a fully developed business model and sufficient capital for growth. They play a crucial role in driving innovation, creating jobs, and promoting competition. Startups in India require identifying a passionate business idea, creating a comprehensive business plan, choosing a legal structure, registering the business, obtaining necessary licenses and permits, setting up a separate bank account, hiring employees, building a brand, securing funding, and maintaining compliance with all legal and regulatory requirements. Startups offer numerous advantages, such as more learning opportunities, flexible schedules, unique rewards, promotion of innovation, responsibility, efficiency, team culture, personalization, and versatility. However, startups face

limitations such as increased risk, low compensation, market access, team composition, resources, flat organizational structures, and stress. The Startup India Scheme, launched in 2016, aims to support and promote start-ups by providing bank finances and eliminating restrictive state government policies. Benefits of the scheme include reduced patent registration fees, improved Bankruptcy Code, freedom from mystifying inspections and capital gain tax, creation of an innovation hub under the Atal Innovation Mission, targeting 5 lakh schools and 10 lakh children, developing new IPR protection schemes, encouraging entrepreneurship, and promoting India as a global start-up hub. Startups can access financing through various sources, including bootstrapping, FFF, seed funding, public funds, crowdfunding, angel investors, bank financing, venture capital, and private equity.

3.20 Glossary

- **MUDRA:** It stands for Micro Units Development & Refinance Agency Ltd., is a financial institution set up by Government of India for development and refinancing of micro units' enterprises.
- **Public funding:** It is money that comes from the government, often through taxes, that is used to help the public through goods and services. The funds are gathered and distributed on different levels such as the federal level, state level, and even local level.
- **Startup:** It is a company that is in the initial stages of business. Founders normally finance their startups and may attempt to attract outside investment before they get off the ground. Funding sources include family and friends, venture capitalists, crowdfunding, and loans.

3.21 Answers to Self-Check Exercise

1. For answer refer to the section 3.3.
2. For answer refer to the section 3.4
3. For answer refer to the section 3.5.
4. For answer refer to the section 3.6.
5. For answer refer to the section 3.8.
6. For answer refer to the section 3.9.
7. For answer refer to the section 3.11.
8. For answer refer to the section 3.13.
9. For answer refer to the section 3.15.
10. For answer refer to the section 3.17.

3.22 Terminal Questions

1. Define startups. Also discuss the meaning, importance, advantages and limitations.
2. What do you mean by startups? Discuss the factors affecting their operations in India.
3. Discuss the different types of startups.
4. Describe the procedure of starting a startup in India.
5. What are the benefits of Startup India scheme? Describe the measures to promote these in India.
6. What are sources of funding for startups in India? Discuss
7. What are the sources of public funding in India? Describe

3.23 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
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- Ramachandran, K. (2014). Entrepreneurship Development: Indian cases on Change Agents. Tata McGraw Hill.
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- Chandra, Prasana: Project Planning Analysis, Financing Implementation and Review. TATA McGraw Hill, New Delhi.
- Patel, Bhavesh M., Project Management, Vikash Publishing House Pvt. Ltd., New Delhi.
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Lesson 4

Entrepreneurship Leadership

Structure

4.0 Introduction

Entrepreneurial leadership is a term that has gained significant attention in recent years. It refers to the unique and dynamic approach of leading a team or organization with an entrepreneurial mindset. This type of leadership is all about taking calculated risks, thinking freely, and being innovative in problem-solving. Entrepreneurial leadership is an approach to leading a team or organization that combines the best of both worlds: entrepreneurship and leadership.

It is about being innovative, forward-thinking, and adaptable in your management style while maintaining focus on achieving business goals.

At its core, entrepreneurial leadership involves taking calculated risks and embracing change as opportunities for growth rather than obstacles to overcome. This requires a willingness to challenge the status quo, be open-minded and curious about new ideas, turn failures into learning experiences, and nurture creativity among your team members. In addition to possessing strong visionary skills that can inspire others to think big picture, successful entrepreneurial leaders are also adept at building relationships based on trust and mutual respect. They know how to motivate their teams by setting clear expectations, providing constructive feedback when necessary but rewarding successes along the way.

Entrepreneurial leaders must also be comfortable with uncertainty – they are not afraid of making bold decisions without all the facts presented upfront because it is part of their natural approach towards problem-solving. This type of leader realizes that success is not just measured by financial results but also in social impact and creating value for customers through innovation-driven initiatives.

4.1 Learning Objectives

After studying this lesson, the students will be able to understand:

- The meaning, definitions, characteristics and objectives of entrepreneurial leadership.
- The importance, components, types, and advantages of entrepreneurial leadership.
- The capabilities, and status of entrepreneurial leadership.
- The suggestions to create entrepreneurial culture.

4.2 Definitions

- **Chris Roebuck,** "Entrepreneurial leadership as organizing a group of people to achieve a common goal using proactive entrepreneurial behaviour by optimizing risk, innovating to take advantage of opportunities, taking personal responsibility and managing change within a dynamic environment for the benefit of an organization."
- **Antoinette Oglethorpe**, "Compares entrepreneurial leadership to white water rafting. To stay afloat in challenging and unpredictable currents, you need purpose, agility, comfort with risk, creativity, and motivational abilities. These same qualities apply to successfully leading a business enterprise in uncertain times."

4.3 Meaning of Entrepreneurship Leadership

Entrepreneurial leaders are not content to coast on the status quo. Rather, they are always on the lookout for new opportunities to innovate and improve. And while traditional leadership methodologies emphasize minimizing risk by adhering to processes and procedures, entrepreneurial leaders understand the value of risk — and understand how to strategically manage it. Entrepreneurial leadership is accompanied by many benefits, including the ability to quickly adapt in dynamic situations; to drive change, both for companies and industries; to devise innovative solutions that help companies remain competitive; to build resilience in uncertain environments; and to set more ambitious, yet attainable, goals. Entrepreneurial leadership is a mindset and approach to business, focusing on growth, innovation, and expansion. It involves a risk-taking attitude and a willingness to find new ways of doing things. These qualities often contrast with more traditional, conservative approaches to leadership that emphasize predictability, caution, and stability. This leadership style is present in many businesses, including small startups and large corporations.

4.4 Characteristics of Entrepreneurial Leaders

The following are the characteristics of entrepreneurial leaders:

- **Effective communication:** Entrepreneurial leaders know how to communicate their vision in a way that inspires and motivates others. They are also skilled at active listening, which allows them to gather information and feedback from those around them. Encouraging productive communication among colleagues helps them to function coordinated and avoid disputes and misunderstandings.
- **Confidence:** Confidence is the belief that you possess the expertise and skills necessary to reach your goals, which often supports others around you to achieve success. Entrepreneurial leaders remain confident in their ability to lead and execute decisions, even when challenges or setbacks occur. They develop this confidence through experience, frequently fuelled by humility and self-awareness of their strengths, abilities, and shortcomings.
- **Self-efficacy:** Entrepreneurial leaders have a high sense of self-efficacy, which allows them to persist during challenges and setbacks. They know how to learn from their mistakes and use that knowledge to improve their performance in the future. Self-confidence also connects to a growth mindset, and enforces the idea that people can develop intelligence and talents through effort and application.
- **Collaboration:** Working together toward a common goal is essential for any organization, and entrepreneurial leaders often know how to cultivate a collaborative environment. They realize everyone has something valuable to contribute and know how to delegate tasks efficiently. Leaders who can successfully collaborate with others are also often skilled at networking, which can be beneficial for finding new opportunities and resources. Leaders also share credit with team members during victories and take responsibility for failures.
- **Growth mindset:** A growth mindset is an important quality for entrepreneurial leaders because it allows them to continue learning and adapting as the business landscape changes. Entrepreneurial leaders also personify a growth mindset of their teams by

encouraging innovation and risk-taking. They embrace change and look for ways to improve their business model. This often helps them achieve challenging organizational objectives.

- **Determination:** Persistence through difficult times is another common quality of entrepreneurial leaders, as they do not give up easily and are always looking for creative solutions to problems. Determination often leads to resilience, which is the ability to recover quickly from setbacks and continue pushing forward. Leaders commit to their goals and foster a culture of determination in their organizations, which helps them achieve success.
- **Passion:** Passion is often then driving force behind entrepreneurial leaders, which leads to high energy and motivation levels. They are usually excited about their work and want to instil that enthusiasm in their team members. Leaders who are passionate about their work are more engaged and produce better results. A passion for one's work can also be contagious, making attracting and employing top talent easier.
- **Creativity:** Entrepreneurial leaders require creativity to discover innovative solutions to problems. They are open to new ideas and happy to try new things. Leaders that are creative thinkers are also more adaptable, allowing them to alter their course quickly when required. Creativity also leads to higher engagement and motivation and improved team morale.
- **Optimism:** Entrepreneurial leaders maintain a positive outlook even during difficult times and see the potential in every situation. This allows them to take advantage of opportunities that others may not see. Optimistic leaders are also more resilient and adaptable, which helps them overcome challenges more easily.
- **Curiosity:** To identify new opportunities, entrepreneurial leaders are inquisitive. Asking questions and exploring new information allows them to better understand the world around them and identify potential problems and solutions. Curious leaders are also more likely to be comfortable with change and leverage it to their advantage.
- **Risk awareness:** All businesses involve some level of risk, and entrepreneurial leaders know the risks involved in their business decisions. They assess and manage these risks effectively to minimize its impact on their business. Their awareness of potential risks enables them to make well-informed decisions and avoid potential drawbacks.
- **Comfort with ambiguity:** Ambiguity is common in business, and being comfortable with it allows you to make judgments without all the information. Entrepreneurial

leaders are also more adaptable to change and can deal with unexpected situations more effectively because they trust their instincts when things are unclear. Developing a level of comfort with uncertainty allows leaders to find success in today's ever-changing business landscape.

- **Ownership:** An ownership mindset is a belief that one is personally responsible for the success or failure of their business. This quality is common in entrepreneurial leaders, as they take the initiative in visualizing a final product and guide the action needed to achieve that vision. These leaders not only identify the steps necessary for achieving their organization's goals but also engage in these steps to ensure they are effective.
- **Initiative:** Taking initiative involves identifying opportunities and taking action without someone prompting you. It is a quality often found in entrepreneurial leaders who constantly look for ways to improve their businesses. Leaders who take the initiative are proactive and adaptable, which helps them and their team succeed.
- **Persuasiveness:** An effective leader can convince others to see things from their perspective and take action. Entrepreneurial leaders often convince investors, customers, and employees to believe in their vision. Persuasive leaders can also communicate their ideas clearly and with conviction, which helps them gain the support they require to achieve their goals.

4.5 Objectives of Entrepreneurship Leadership

The following are the objectives:

- **Confidence:** Entrepreneurial leaders are in a situation where they are trying something new and they are not sure of success. They are constantly stretching themselves and that requires confidence. Confidence is equal to or even more important than competence to succeed as a leader. Elon Musk's confidence has got him into a bit of trouble recently. But it has also helped him turn a pipe dream – an all-electric car company – into a viable business in a high-risk, high-cost industry.
- **Self-Awareness:** Self-Awareness is essential for Entrepreneurial Leadership. Leaders who have an understanding of their own emotions, personality, strengths and weaknesses can better engage with employees and clients. Oprah Winfrey says you need a level of self-awareness that only comes from connecting with your inner voice. She calls it your emotional GPS system.
- **Understanding and Committing to Life Goals:** Entrepreneurial leaders allow their strong sense of passion and purpose to drive themselves and inspire those around them.

This helps them stay focussed and motivates employees and partners to produce their best efforts to help make it a reality. Before Harry Potter was a success, J K Rowling was a single mother struggling to make ends meet and battling severe depression. Despite all her personal hardships, Rowling kept pursuing her dreams of becoming a writer.

- **Integrity:** Integrity is one of the most important qualities of entrepreneurial leadership. It is about remaining true to one's own values and vision and standing up for what they believe in, even in the face of opposition. As Benjamin Franklin said, "I grew convinced that truth, sincerity and integrity in dealings between man and man were of the utmost importance to the felicity of life and I formed written resolutions to practice them over while I lived."
- **Managing and Motivating Subordinates:** Managing and motivating people is probably one of the most important entrepreneurial leadership skills. It directly influences productivity because of its impact on staff morale. Virgin is famous for putting employees first. Richard Branson's philosophy is to put staff first, customers second and shareholders third. He believes if you look after your people and give them the tools to do a good job, they will be proud of the brand and deliver a great experience to the customer.
- **Developing Subordinates:** Entrepreneurial leaders are committed to developing the people who work for them. They help employees develop their own talents and skills. They know it is essential to help employees grow so that the business can flourish into the future. Larry Page became famous for co-founding Google, a company that literally changed the way the world learns. He continues to drive and innovate by training and delegating. He can put his ego aside and does not feel threatened by sharing authority. He realises that he cannot do everything alone and that giving others authority will benefit the company over the long term.
- **Team Management/Development:** The cornerstone of a successful enterprise is strong and effective teams. Entrepreneurial leaders ensure that team morale remains high. In the early days of Amazon, Jeff Bezos instituted a rule that every internal team should be small enough that it can be fed with two pizzas. The goal was not to cut down on the catering bill. It was focussed on two aims – efficiency and scalability.
- **Execution and Operational Management:** Execution and Operational Management play a vital role in the success of a company. Entrepreneurial leaders need strategies

that maximize productivity and effectively respond to fluctuations in demand. The Walt Disney Company has been able to build an Operating Model that enables them to deliver on the promise “to make magical experiences come alive.”

- **Innovation, Creativity and Entrepreneurship:** Entrepreneurial leaders are constantly being creative and innovative to get better. Steve Jobs built one of the world’s most lucrative companies out of his garage and introduced the world to technology it never knew it needed. 7 years after his death, he still has a lot to offer. When he returned to Apple after a 12-year absence, Apple was close to bankruptcy. That did not stop him from launching one innovative product after another. He made the bold statement “The cure for Apple is not cost-cutting. The cure for Apple is to innovate its way out of its current predicament.”
- **Functional Knowledge:** Entrepreneurial leaders need to have some basic functional knowledge. Bill Gates frequently works with inventors and industry disrupters and reads books about the future of humanity. He concludes that people with knowledge of science, engineering and economics will be the future agents of change. He says “It’s not necessarily that you’ll be writing code, but you need to know what engineers can and can’t do”.
- **Gathering Information and Insight:** Before an entrepreneurial leader can take action, they need good information. It is vitally important to have information from different perspectives. It is equally important to quickly draw insights and make decisions. Mark Zuckerberg’s love of data has got him into a bit of trouble recently. But he knows the power of information. And it is how he is grown Facebook to its

4.6 Importance of Entrepreneurial Leadership

Entrepreneurial leadership involves organizing and motivating a group of people to achieve a common objective through innovation, risk optimization, taking advantage of opportunities, and managing the dynamic organizational environment. The traditional corporate mindset has its focus on systems and processes, whereas the entrepreneurial style is more risk oriented. The importance is described as under:

- **Communication skills:** The leader can clearly articulate their ideas, and the plan to achieve common goals. They encourage communication between departments and across levels. They avoid ambiguities and generalizations, and can avoid conflict and misunderstanding due to poor communication.

- **Vision:** A successful entrepreneurial leader has a clear vision. He knows exactly where he wants to go and how to get there. They communicate their vision to the team and work with them to make the vision a reality.
- **Supportive:** An entrepreneurial leader realizes the importance of initiative and reactiveness, and they go out of their way to provide all the support that the team needs to achieve their goals. The leader usually does not punish employees when they take a calculated risk which misfires. Instead, they sit down with employees to analyse what went wrong and work with them to correct the mistakes.
- **Self-belief:** The leader has tremendous belief in themselves and has confidence gained from years of experimenting, at times failing, and learning. They are aware of their strengths and weaknesses, and demonstrate their skills without hubris. An entrepreneurial leader is very self-assured.
- **Shares success:** When the team or the organization succeeds at something, the leader does not hog the limelight or take all the credit. They acknowledge the contribution of others and shares the accolades with them.
- **Involved:** You will not find an entrepreneurial leader cooped up in the office. Leaders like to spend time among employees, walk around the factory or department, interact with everyone, and see them doing their job. This leader will usually take some time out to informally chat with employees, and understand their work and personal challenges.
- **Create an atmosphere conducive to growth:** With a deep understanding of the importance of other people's contribution to organizational success, the entrepreneurial leader creates an atmosphere that encourages everyone to share ideas, grow, and thrive. They actively seek other's opinions, and encourages them to come up with solutions to the problems that they face. The entrepreneurial leader also provides positive feedback when employees come forward with an opinion.
- **Honesty:** Honesty is the most important quality of an exceptional leader. Entrepreneurial leaders who are honest can quickly win the trust of their employees. People respect leaders to come across as honest, and are more likely to accept positive or negative feedback and work harder.
- **Perseverance:** When the going gets tough, the entrepreneurial leader perseveres. True entrepreneurs simply do not quit, they keep going till they find what they are looking for.

- **Learning:** The leader not only invests significantly in learning and updating their knowledge, but they also create a learning environment in the organization encouraging others to improve their knowledge, widen their experience, and tackle multiple challenges. They encourage employees to think freely and come up with creative solutions to problems.

4.7 Components of Entrepreneurial Leadership

Ireland and Hitt (1999) proposed that entrepreneurial leadership consists of five major components, which are essential for understanding and practising effective leadership in an entrepreneurial context. These components provide a framework for individuals and organisations to foster innovation, create opportunities, and drive growth.

I. Strategic Leadership: Strategic leadership is a critical component of entrepreneurial leadership that involves the ability to set a clear direction and make informed decisions to guide an organisation toward its long-term goals. It plays a fundamental role in entrepreneurial success, as it ensures that the entrepreneurial efforts are aligned with a well-defined strategy. Strategic leadership is a foundational component of entrepreneurial leadership because it provides the roadmap for an organisation's journey. It helps ensure that entrepreneurial efforts are purposeful, well-coordinated, and focused on long-term success. By setting a clear vision, establishing strategic priorities, and making informed decisions, entrepreneurial leaders can guide their ventures toward sustainable growth and competitive advantage in a dynamic business landscape. Strategic leadership includes:

- **Vision and Mission:** Strategic leaders in entrepreneurship begin by establishing a compelling vision for the future and a clear mission that defines the organisation's purpose. The vision serves as an aspirational goal, while the mission outlines the organisation's fundamental reason for existence. This vision and mission provide a sense of purpose and direction, which motivates and guides the entire team.
- **Goal Setting:** Strategic leaders define specific, measurable, and achievable goals that are consistent with the organisation's vision and mission. These goals serve as the milestones that indicate progress toward the desired future state. Entrepreneurs must set challenging yet realistic objectives that inspire their teams and keep them focused on the organisation's strategic priorities.
- **Market Analysis and Opportunity Assessment:** Entrepreneurs need to conduct a thorough analysis of the market to identify opportunities and threats. Strategic leaders gather data, assess industry trends, and understand customer needs to make informed decisions about

the direction of the business. They are continuously scanning the environment for opportunities that align with their strategic goals.

- **Competitive Positioning:** Strategic leaders evaluate the competitive landscape to determine the organisation's position relative to competitors. They seek ways to differentiate their products or services, create a competitive advantage, and develop strategies to capture market share. Strategic positioning helps the organisation stand out in a crowded market.

II. Innovation and Opportunity Seeking: Innovation and Opportunity Seeking is a critical component of entrepreneurial leadership that emphasises the importance of fostering innovation and actively seeking out new opportunities. Innovation is the process of introducing new, creative ideas, products, services, or processes that bring value to an organisation. It is about fostering a culture of creativity, proactively identifying and pursuing opportunities, and effectively managing risks and resources. Entrepreneurial leaders continuously seek to innovate and adapt, positioning their organisations for long-term success in an ever-changing business environment.

- **Resource Allocation:** Once opportunities are identified, entrepreneurial leaders allocate resources effectively. They ensure that the organisation's financial, human, and technological resources are channelled toward pursuing the most promising opportunities. Proper resource allocation is critical for turning ideas into tangible results.
- **Intrapreneurship:** In larger organisations, entrepreneurial leaders may encourage intrapreneurship, which involves employees within the organisation actively seeking and developing new opportunities. They create an environment where employees are motivated to act like entrepreneurs within the company, fostering innovation from within.
- **Networking:** Building and maintaining a network of industry contacts and potential partners is essential for identifying opportunities. Entrepreneurial leaders leverage their connections to gain insights, access resources, and collaborate with others to capitalize on opportunities.
- **Vision:** Having a clear vision for the organisation's future is crucial for recognising which opportunities align with the company's long-term goals. This vision provides direction and purpose, guiding the pursuit of opportunities.

III. Risk Management and Tolerance: Risk management and tolerance as a component of entrepreneurial leadership are crucial aspects of leading in an entrepreneurial context. Entrepreneurial leaders must navigate uncertainty and make decisions that involve varying degrees of risk. These are explained in detail below:

a) **Risk Management**

- **Identifying Risks:** Entrepreneurial leaders begin by identifying potential risks and uncertainties that may affect their business. This includes market risks, financial risks, operational risks, regulatory risks, and more.
- **Assessing Risks:** Once identified, they assess the likelihood and potential impact of each risk. This assessment involves a careful analysis of the risk factors, including their magnitude and potential consequences.
- **Mitigating Risks:** Entrepreneurial leaders develop strategies and plans to mitigate or reduce the impact of identified risks. This may involve implementing safeguards, diversifying resources, or creating contingency plans to address potential issues.
- **Monitoring Risks:** Continual monitoring of risks is a critical aspect of risk management. Entrepreneurial leaders keep a close eye on the business environment to identify new risks and assess changes in existing ones.

b) **Risk Tolerance**

- **Defining Risk Tolerance:** Risk tolerance is the degree of risk that an entrepreneur or organisation is willing to accept to achieve their goals. It varies from person to person and from organisation to organisation. Some individuals and organisations are risk-averse, while others are more risk-tolerant.
- **Aligning with Objectives:** Entrepreneurial leaders must align their risk tolerance with their strategic objectives and mission. The level of risk they are willing to accept should be consistent with their long-term vision and goals.
- **Balancing Risk and Reward:** Entrepreneurial leaders make calculated decisions that balance the potential rewards of taking risks against the potential negative outcomes. They seek to maximise opportunities while minimising negative consequences.
- **Cultural and organisational Factors:** Risk tolerance is influenced by the organisation's culture and values. In some entrepreneurial environments, a culture of innovation and risk-taking is encouraged, while in others, a more conservative approach is favoured. Leaders must ensure that their risk tolerance is in line with the prevailing organisational culture.

IV. **Resource Leveraging:** Resource leveraging is a fundamental component of entrepreneurial leadership, which involves effectively utilising and maximising available resources to achieve entrepreneurial goals and drive innovation. It is the art of efficiently deploying various assets, including financial, human, intellectual, physical, and social resources, to create value and seize opportunities.

- **Financial Resources:** Entrepreneurs often need to secure capital to start or expand their ventures. Resource leveraging involves efficiently managing financial resources, including raising funds through investments, loans, or bootstrapping, and using them wisely to support the growth and sustainability of the business.
- **Human Resources:** Effective entrepreneurial leaders must optimise skills, talents, and efforts of their team members. This involves recruiting, training, and motivating employees to maximise their potential and contribute to the success of the venture. Resource leveraging in this context also includes delegation and empowerment to ensure the right people are working on the right tasks.
- **Intellectual Resources:** Intellectual property, knowledge, and expertise are essential assets for many entrepreneurial ventures. Entrepreneurs need to leverage these resources by protecting intellectual property through patents, copyrights, or trademarks, and by fostering a culture of innovation and learning within the organisation.
- **Physical Resources:** These resources encompass tangible assets such as equipment, facilities, and technology. Entrepreneurs should optimise their utilisation, maintenance, and upgrade to enhance operational efficiency and support growth. Efficiently managing physical resources can help reduce costs and improve productivity.
- **Social Resources:** Building and maintaining relationships with stakeholders, including customers, suppliers, partners, and investors, is a critical aspect of resource leveraging. Entrepreneurs need to nurture these connections, harness their support, and create mutually beneficial collaborations to access new opportunities and markets.

V. Proactiveness and Competitive Aggressiveness:

a) Proactiveness is a fundamental trait of entrepreneurial leadership, emphasising the willingness and ability of a leader to take initiative and seize opportunities before they become apparent to others. It involves being forward-thinking, innovative, and constantly on the lookout for new trends, ideas, and unmet needs in the market. Proactive entrepreneurs do not wait for opportunities to come to them; they actively seek and create them. They are willing to take calculated risks and invest resources in pursuit of their vision. Key characteristics of proactiveness in entrepreneurial leadership include:

- **Vision:** Proactive leaders have a clear vision of what they want to achieve and are driven by their goals and aspirations.

- **Innovation:** They are open to change and continuously seek innovative solutions to problems.
- **Risk-taking:** Proactive leaders are willing to take risks and invest in new ventures, products, or services.
- **Learning and Adaptability:** They are quick to learn from their experiences, adapt to changing circumstances, and adjust their strategies accordingly.

b) Competitive aggressiveness in entrepreneurial leadership refers to the leader's assertiveness and determination to compete effectively in the market. Entrepreneurial leaders who are competitively aggressive are not only focused on maintaining their market share but also on gaining a competitive advantage over rivals. They are willing to confront and challenge competitors and strive to outperform them. Key characteristics of competitive aggressiveness in entrepreneurial leadership include:

- **Market Positioning:** These leaders carefully position their products or services to stand out and offer a unique value proposition.
- **Market Analysis:** They continually analyse the market and competition to identify weaknesses, opportunities, and threats.
- **Strategic Decision-Making:** Competitive leaders make strategic decisions to gain a competitive edge, such as pricing strategies, product differentiation, or market expansion.
- **Resource Allocation:** They allocate resources effectively to support competitive strategies, which might involve increasing marketing efforts, research and development, or operational efficiency.

4.8 Types of Entrepreneurial Leadership

The following are the types:

- **Affiliative leadership:** Affiliative leadership mainly focuses on people and relationships that will help et optimal results. It is one of the styles of entrepreneurial leadership which helps to meet the needs of individuals rather than performance. This model is necessary for an organization because it helps a lot to address the problems of team members and managers effectively. This model makes feasible ways to establish trust and creditability among employees or groups when they face a crisis in a workplace. The primary advantage of affiliative leadership is that it gives ways to create a better working environment in an organization.
- **Democratic leadership:** A democratic or participative leadership involves getting inputs from team members and engaging them in the leadership process. It aims at reaching a

consensus through participation to generate new ideas and approaches for the benefit of a company. This leadership model relies mainly on teams to make better decisions rather than individuals. It works well for a company that is looking for changes and an agile workforce. At the same time, democratic leadership works only if the teams are highly competent.

- **Authoritative or visionary leadership:** The authoritative or visionary leadership has a long view in mind that helps a business to get the desired outcomes. It provides ways to motivate employees and teams while planning important activities. A visionary leader will utilize a “come with me” approach and has a proper understanding of challenges. This model is one of the best styles of entrepreneurial leadership because it has a clear vision for achieving success. The leadership offers guidance to teams and employees to maintain a positive attitude in working places.
- **Pacesetting leadership:** Pacesetting leadership aims at setting high standard performance for a leader as well as the team in an organization. This approach is suitable for highly competent and motivated teams who work under tight deadlines. It is one of the leadership styles in business that will help enhance the skills of a team. A leader will lead by an example in this approach and stick to activities better. Furthermore, he/she may expect the same outputs from teams when they are highly motivated and skilled. The model is very effective in small group settings that can increase performance levels.
- **Coaching leadership:** Coaching leadership is also one of the leadership styles in business that involves identifying the strengths and weaknesses of teams. This approach will offer solutions for the problems by developing the behaviours and skills. A leader acts as a coach in this model and finds the gaps in the development gaps with more attention. He/she will work closely with teams to address their issues as soon as possible while planning important activities.
- **Transformational:** Transformational leadership is the best entrepreneurial leadership for a business because it has a shared vision of the future. Also, a leader will use effective communication skills in this approach to reach out to a team quickly. A transformational leader will have outstanding qualities such as self-awareness, empathy, integrity, etc. All of them enable a business to increase its productivity and growth to a large extent.

4.9 Advantages of Entrepreneurial Leadership

The advantages that can help organizations achieve their goals includes:

- **Adapting to circumstances:** The ability to adapt quickly can be an asset in industries likely to change often or during general organizational, social, or cultural changes. It also helps businesses take advantage of missed opportunities that might have been detrimental to the organization.

- **Driving industry change:** A leader's ability to motivate and inspire change can help companies and industries progress. This is especially true if their innovative vision helps the company create a new market or enter a new growth phase.
- **Encouraging innovation:** The ability to think creatively and develop innovative solutions to challenges can help companies and organizations stay competitive. It can also lead to developing new products, services, or processes to improve the bottom line.
- **Centralizing responsibility:** Many practitioners of this style prefer to make significant decisions that shape their company's direction toward success, which can concentrate on responsibility in that leadership role. It can also help prevent blame when things go wrong.
- **Developing a strong following:** Leaders who can gain the trust and respect of their employees are more likely to get buy-in for their vision. This can lead to greater employee productivity and motivation.
- **Building morale:** A positive work environment is essential for employee retention and high performance. Leaders who build a positive culture within their organization can help improve employee morale and reduce turnover.
- **Increasing profitability:** One of the main goals of any business is to be profitable, and entrepreneurial leaders are more likely to make decisions that increase profits. Leaders can achieve this through cost-cutting measures, revenue growth, or both.

4.10 Capabilities of Entrepreneurial Leaders

In 2008, the Centre for Creative Leadership joined forces with Tata to research leadership in fast-growth companies. They discovered that Entrepreneurial leadership is the result of a combination of strong motivation to achieve something and the capabilities to achieve it. Those capabilities fall into three areas:

- **Leading self:** Entrepreneurial leaders need effective ways to manage their thoughts, emotions, actions, and attitudes. Specific capabilities include confidence; self-awareness; understanding and committing to life goals; and integrity.
- **Leading others:** Entrepreneurial leaders need interpersonal and social skills to influence people. Specific capabilities include managing and motivating subordinates; developing subordinates; and team management/development.
- **Leading the business:** Entrepreneurial leaders need the skills and behaviours to run a business and deliver results. Specific capabilities include execution and operational

management. Also, innovation, creativity, and entrepreneurship; functional knowledge; and gathering information, knowledge, and insight.

4.11 Status of Entrepreneurial Leadership in the Present Era

The status of entrepreneurial leadership in the various established companies have been described with the help of following points and examples:

a) Driving Innovation and Disruption: Entrepreneurship leadership drives innovation and disruption by fostering a culture of exploration and experimentation. It encourages team members to think freely and challenge traditional norms. Effective leaders provide resources and support for individuals to pursue innovative ideas. They empower employees to take risks and embrace failure as learning opportunities. By creating an environment that rewards creativity and curiosity, entrepreneurship leaders inspire their teams to push boundaries and develop groundbreaking solutions. This approach has led to the development of game-changing products, services, and business models in various industries.

For example: Elon Musk's leadership at Tesla exemplifies effective entrepreneurship leadership. Through his vision, Musk has revolutionized the electric vehicle industry, challenged conventional norms and pushed the boundaries of innovation. He has shown the importance of taking calculated risks and making bold decisions, such as investing heavily in advanced battery technology. Musk's ability to adapt to changing market needs and his relentless pursuit of excellence has propelled Tesla to become a global leader in sustainable transportation. His hands-on approach and commitment to delivering high-quality products have earned customer loyalty and trust. Musk's entrepreneurial mindset is evident in his mission to accelerate the world's transition to sustainable energy, inspiring others to think big and drive positive change.

b) Promoting Intrapreneurship: Promoting intrapreneurship within an organization is a vital aspect of entrepreneurship leadership. By encouraging employees to think and act like entrepreneurs, companies can foster innovation and drive growth from within. Leaders can create an environment that supports intrapreneurship by providing autonomy and resources to employees, allowing them to pursue new ideas and initiatives. This can be done through designated innovation programs, internal competitions, or even allocating a certain percentage of employees' time for entrepreneurial projects. The result is a workforce that feels empowered and motivated, leading to the emergence of new products, services, and business opportunities that can benefit the overall organization.

For example: Richard Branson, known for his entrepreneurship leadership in Virgin Group, exemplifies the qualities necessary for fostering entrepreneurial ventures.

- Branson's bold vision and willingness to take risks have led to the expansion of the Virgin brand into various industries.
- He encourages a culture of innovation, giving employees the freedom to explore new ideas and offering support to turn them into reality.
- Branson values collaboration and actively seeks input from team members, recognizing that diverse perspectives lead to better outcomes.
- His emphasis on employee empowerment and development fosters a growth mindset and encourages individuals to think like entrepreneurs within the organization.
- Through his leadership, Branson has built a successful entrepreneurial ecosystem that inspires creativity, fosters innovation, and drives long-term growth.

c) Creating a Culture of Continuous Improvement: Fostering a culture of continuous improvement is vital for entrepreneurial ventures to thrive. Entrepreneurship leaders must encourage their teams to constantly seek ways to enhance processes, products, and services. This involves promoting a mindset of experimentation and learning from failures. By establishing regular feedback loops, implementing agile methodologies, and encouraging knowledge sharing among team members, companies can continually adapt and innovate. Additionally, providing resources and development opportunities for employees to enhance their skills and knowledge contributes to a culture of continuous improvement. This approach enables businesses to stay competitive and evolve in an ever-changing market.

For example: Jeff Bezos, the founder of Amazon, exemplifies entrepreneurship leadership through his relentless focus on customer-centric innovation. One of Bezos' notable practices is embracing failure as a learning opportunity, encouraging his teams to experiment and take risks to drive growth and advancement. By nurturing a culture of innovation and embracing a long-term perspective, Bezos propelled Amazon to become a global e-commerce giant and expanded its reach into various industries. His ability to envision and pursue bold ideas has been instrumental in Amazon's success. Bezos' approach highlights the significance of fostering a culture that values experimentation and embraces a customer-first mindset in entrepreneurial ventures.

4.12 Suggestions to Create Entrepreneurial Culture in the Organisation

The following points must take into consideration while creating entrepreneurial culture:

a) Building a Supportive Environment: Building a supportive environment is vital for effective entrepreneurship leadership. It involves creating a workplace culture where individuals feel valued, encouraged, and empowered. Leaders can foster this environment by promoting open communication channels, actively listening to employees' ideas, and providing resources for their professional development. Additionally, implementing flexible work arrangements and recognizing and rewarding achievements can further encourage a supportive atmosphere. For instance, organizing team-building activities and offering mentorship programs can foster collaboration and trust among team members. By building a supportive environment, leaders can nurture the entrepreneurial spirit within their teams and drive innovation and growth.

b) Encouraging Innovation and Creativity: One important aspect of entrepreneurship leadership is encouraging innovation and creativity. By fostering an environment that values and rewards new ideas, leaders can inspire their team members to think freely and come up with innovative solutions. This can be done through initiatives such as regular brainstorming sessions, providing resources for experimentation, and recognizing and celebrating creative contributions. For example, leaders can encourage employees to explore different approaches to problem-solving and empower them to take calculated risks. This not only cultivates an innovative culture but also leads to the development of unique and groundbreaking products or services.

c) Promoting Collaboration and Teamwork: Fostering collaboration and teamwork is a vital aspect of entrepreneurship leadership. By encouraging open communication and fostering a supportive work environment, leaders enable teams to pool their diverse skills and perspectives towards a common goal. Collaborative efforts not only enhance problem-solving abilities but also spur innovation and creativity through the synthesis of different ideas. For instance, implementing cross-functional projects or assigning team-based tasks can facilitate collaboration and enhance overall team performance. Effective leaders recognize the value of collaboration in driving entrepreneurial success and actively promote it through team-building initiatives and creating avenues for idea-sharing and knowledge exchange among team members.

d) Empowering Employees: Empowering employees is a vital aspect of entrepreneurship leadership. It involves providing individuals with autonomy and authority to make decisions and take ownership of their work. This fosters a sense of ownership, motivation, and accountability among team members. Some ways to empower employees include:

- Delegating responsibilities and tasks based on individual strengths.
- Encouraging open communication and actively seeking input and feedback.
- Providing opportunities for skill development and professional growth.

- Recognizing and celebrating achievements and contributions.
- Allowing for experimentation and learning from failures.

By empowering employees, entrepreneurship leaders create a culture of innovation and collaboration, driving the success of entrepreneurial ventures.

e) Fostering a Growth Mindset: Fostering a growth mindset is vital in entrepreneurship leadership. It encourages individuals to embrace challenges and persist in the face of setbacks, fostering innovation and learning. By promoting a culture that values continuous improvement and emphasizes the belief in one's ability to develop and grow, leaders can empower their team members to take risks and explore new opportunities. This mindset enables individuals to see failures as learning experiences and motivates them to seek feedback and develop new skills. For example, leaders can encourage employees to set stretch goals and provide resources for professional development, fostering a growth-oriented environment.

f) Providing Resources and Development Opportunities: Providing resources and development opportunities is a fundamental aspect of effective entrepreneurship leadership. By equipping team members with the necessary tools and training, leaders enable them to reach their full potential and contribute to the success of the venture. This can include access to mentorship programs, training workshops, industry networks, and financial resources. Additionally, leaders should encourage continuous learning and offer growth opportunities to foster the entrepreneurial mindset within the team. By investing in the development of their employees, leaders create a more innovative and adaptable workforce capable of driving the venture forward.

4.13 Self-Check Exercise

1. Define entrepreneurship leadership.
2. Write a short-note on characteristics of entrepreneurial leadership.
3. What do you understand by objectives of entrepreneurial leadership? Discuss in brief.
4. Describe in brief about the importance of entrepreneurial leadership.
5. What do you mean by pacesetting? Discuss in brief.
6. What do you mean by pacesetting leadership? Write a short-note.
7. What are the advantages of entrepreneurial leadership? Discuss in brief.
8. Write a short-note on capabilities of entrepreneurial leaders.
9. What is the status on status of entrepreneurial leadership? Discuss in brief.
10. What are the measures to create entrepreneurial culture in an organisation? Give suggestions.

4.14 Summary

Entrepreneurial leadership is a dynamic approach that combines entrepreneurship and leadership, involving taking calculated risks, thinking freely, and being innovative in problem-solving. Successful entrepreneurs build relationships based on trust and mutual respect, set clear expectations, provide constructive feedback, and reward successes. They must be comfortable with uncertainty, making bold decisions without all the facts presented upfront, and understand that success is measured by social impact and creating value for customers through innovation-driven initiatives. Key characteristics of entrepreneurial leadership include effective communication, confidence, self-efficacy, collaboration, growth mindset, determination, passion, creativity, optimism, curiosity, risk awareness, comfort with ambiguity, ownership, and persuasiveness. Creativity is essential for entrepreneurs to discover innovative solutions and be open to new ideas and experiences. Optimistic leaders maintain a positive outlook, seeing potential in every situation and being more resilient and adaptable. Curiosity is another key characteristic, and risk awareness is another key quality. Strategic leadership is crucial, setting clear direction and making informed decisions to guide an organization toward its long-term goals. Creating an entrepreneurial culture in an organization requires building a supportive environment, encouraging innovation and creativity, empowering employees, providing resources and development opportunities, and fostering a growth mindset. By investing in employee development, leaders can create a more innovative and adaptable workforce capable of driving ventures forward.

4.15 Glossary

- **Entrepreneurial leadership:** It is a mindset that emphasizes the strategic management of risk and dynamic, changing systems. Entrepreneurial leaders look for new opportunities and ways to innovate as individuals and as part of a team.
- **Entrepreneurial leader:** They will proactively identify opportunities to gain advantage through creativity, innovation and market understanding and then hold themselves responsible for delivering what customers need via the effective management of risk to optimise outcomes for both the organization and the customer.

4.16 Answers to Self-Check Exercise

1. For answer refer to the section 4.3.
2. For answer refer to the section 4.4.
3. For answer refer to the section 4.5.
4. For answer refer to the section 4.6.

5. For answer refer to the section 4.7 (V-a).
6. For answer refer to the section 4.8.
7. For answer refer to the section 4.9.
8. For answer refer to the section 4.10.
9. For answer refer to the section 4.11.
10. For answer refer to the section 4.12.

4.17 Terminal Questions

1. Define entrepreneurship leadership. Discuss the meaning, characteristics and objectives.
2. What is the importance of entrepreneurial leadership? Discuss
3. Describe the components of entrepreneurial leadership.
4. What are the advantages of entrepreneurial leadership? Discuss the leadership styles used by the entrepreneur to establish an effective organisation.
5. What are the capabilities of the entrepreneurial leaders? Give suggestions to create an effective entrepreneurial culture in your organisation.

4.18 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
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- Ramachandran, K. (2014). Entrepreneurship Development: Indian cases on Change Agents. Tata McGraw Hill.
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UNIT II

Identification of investment opportunities: Project ideas generation and screening. Phases in Project Management, Project feasibility study, Appraisal criteria and process; Methods of appraisal under certainty, uncertainty and risk.

Lesson 1

Identification of Opportunities

Structure

1.10 Introduction

An entrepreneur has innumerable opportunities available to him but he must identify the best opportunities out of the existing opportunities. One can have a large list of the available opportunities from the magazines, Internet, Government, Friends, relatives and so on. To select the best business opportunity, one needs creativity, skills and vision to analyse the available information. It is also important for an entrepreneur to identify the opportunities and to select the best opportunity. At times, entrepreneur may be in dilemma and may find one opportunity more lucrative and the other time can also find other opportunity more profitable. Therefore, entrepreneur must choose the best opportunity by applying his mind and soul so that he/she can make profits.

1.10 Learning Objectives

After studying this lesson, students should be able to understand the:

- Concept, meaning, types, characteristics, need and other aspects related to opportunity and opportunity identification and selection of business opportunities.

1.2 Opportunity: An Overview

In general, the word opportunity means a favourable situation or a circumstance provided to do something for the advancement or progress. Therefore, business opportunity is a favourable chance available for an entrepreneur to run the business and earn profits at a given point of time in particular environment. For an entrepreneur opportunity means a product or a project. Therefore, identification of opportunity, product or a project is similar. An entrepreneur may come across many profitable opportunities but he must select the most possible and hopeful project. Therefore, Project identification and selection are the important phases for an entrepreneur.

1.3 Types of Opportunity

Peter Drucker has explained the three types of opportunities in this context, as following:

- **Additive Opportunities:** these are the opportunities which are related to the use of the available resources without making any changes. Therefore, there is very less risk in such opportunities.
- **Complementary Opportunities**: These are related to the introduction of the new ideas which directs the change in the available arrangement. There is a greater risk in such opportunities.
- **Breakthrough Opportunities**: These are related to the huge change in the existing arrangements which thus involve huge risk.

1.4 Characteristics of Opportunity

A good opportunity has following characteristics:

- **Clarity:** Good opportunities are clear, well defined, and straightforward. They allow businesses to accurately and completely identify problems and create solutions that can maximise their potential.
- **Relevance:** Good opportunities are relevant to the scenario in which they exist. They provide added value to customers, markets, and industries. This means they do not only represent potential but also relevance for solving existing problems or creating added value for others.
- **Feasibility:** Good opportunities are realistic and feasible. They help businesses achieve their goals while making them more efficient, productive, and profitable.
- **Profitable:** A good opportunity can provide returns on investment. It can achieve its objectives while capitalising on the available resources, strategies, and assets more efficiently.

- **Scalable:** A good opportunity is scalable. This means it can be expanded to a big or a wide scale. It can extend to various markets and industries while maximising the results of investments in terms of time, human resources, and money.

A business opportunity must be evaluated from the view point of production, technology, demand, profits, society etc.

1.5 Need for Opportunity Identification and Selection

Enterprise and entrepreneur are complimentary to each other. Therefore, the success of an entrepreneur depends on his suitability of the enterprise and at the same time the successful enterprise can be started if the entrepreneur has the characteristics and skills to handle that enterprise. Therefore, there is a need for the opportunity identification and selection because if opportunity is not selected based on the skills and there is non- suitability between the entrepreneurs and the enterprise then there will be business failure.

- **Build a business:** A business opportunity can be an existing unsolved problem in the market or a new problem arising from current trends, which is the chance to build a business.
- **Avoid failure:** A business is likely to fail without opportunities. This is because they are essential for implementing ideas and innovations that can make a business successful. They allow businesses to take the right decision at the right time.
- **Growth and Development:** Opportunities allow businesses to create and implement ideas and innovations. It is also a chance to improve performance by solving existing problems better, providing a more refined value proposition to the target market, and building a more efficient business model.
- **Maximise profits:** A business opportunity involves favourable conditions that can be used to increase profits. These conditions include but are not limited to the availability of resources, the existence of market demand, and the presence of favourable competition. The goal is to find solutions that can potentially maximise profits while solving problems.

1.6 Importance of Opportunity Identification

Opportunity identification is crucial for the success and growth of any business, regardless of its size or industry. Here are some reasons why we think opportunity identification is crucial for the success and growth of any business opportunity:

1) **Gain a Competitive Advantage:** Identifying new business opportunities in the marketplace helps businesses stay ahead of their competitors and remain relevant

to their customers. By developing innovative products and services, businesses can gain a competitive edge and increase their market share.

- **Staying Ahead of Competitors:** In a fast-paced and competitive business environment, identifying new opportunities is akin to having a strategic compass. It allows businesses to anticipate shifts in the market and outmanoeuvre competitors, securing a prime position in the race for success.
- **Relevance to Customers:** As customer preferences and demands evolve, businesses need to continuously align their offerings with what their target audience desires. Opportunity identification ensures that products and services are tailored to meet these evolving needs, thereby maintaining customer relevance.
- **Innovation as a Key Driver:** A competitive advantage is not just about staying in the race; it is about leading it. By spotting emerging trends and recognizing unmet needs, businesses can pioneer the creation of innovative solutions that set them apart as industry leaders.
- **Expanding Market Share:** The pursuit of new business opportunities is synonymous with growth. As businesses introduce fresh and appealing products/services to the market, they draw in new customers, expand their customer base, and ultimately increase their market share.
- **Building Brand Loyalty:** The process of identifying and capitalizing on opportunities reinforces a business's commitment to meeting customer needs. This fosters a strong sense of loyalty among customers, who recognize the brand's responsiveness to their evolving requirements.

For Example, a smartphone manufacturer identifies a rising trend in augmented reality (AR) technology. To gain a competitive advantage, they invest in developing smartphones with advanced AR capabilities, outmanoeuvring competitors and securing a leadership position in the market.

b) Identify and address Important but Unmet Customer Needs

- **Understanding Customer Pain Points:** The core of opportunity identification lies in deciphering the pain points and unmet needs of customers. By delving into these areas, businesses gain insights into the challenges their customers face, enabling them to offer tailored solutions.
- **Tailoring Solutions to Real Needs:** Rather than a one-size-fits-all approach, opportunity identification enables businesses to create offerings that precisely address

specific customer needs. This customization fosters a strong resonance between the product/service and the customer's actual requirements.

- **Enhanced Customer Satisfaction:** When customers find that a business understands and addresses their unique needs, satisfaction levels soar. A satisfied customer is not only more likely to return but also more inclined to become an advocate, sharing their positive experiences with others.
- **Fostering Customer Loyalty:** Beyond mere satisfaction, addressing unmet needs cultivates a deeper connection with customers. They recognize the business's commitment to enhancing their lives, leading to long-term loyalty and advocacy.
- **Reducing Churn and Attrition:** As customer needs are met more comprehensively, the likelihood of them seeking alternatives decreases. This reduction in churn and attrition contributes to stabilized revenues and growth.
- **Word-of-Mouth Amplification:** Satisfied customers become powerful brand advocates, spreading positive word-of-mouth endorsements to their network. This organic promotion further enhances the brand's reputation and attracts new customers.

For example, an online streaming service recognizes that users often struggle with content discovery. In response, the service introduces an algorithm-based recommendation system, addressing the pain point and significantly enhancing the user experience.

c) Enabler for Innovation

- **Catalyst for Creative Evolution: Opportunity identification** acts as a catalyst for driving innovation within a business. When faced with unmet needs or emerging trends, businesses are compelled to think freely and devise novel solutions.
- **Nurturing Evolutionary Solutions:** The pursuit of identifying opportunities necessitates businesses to envision not just what is, but what could be. This forward-looking mindset fosters the creation of solutions that not only meet current demands but also anticipate future needs.
- **Differentiation Amidst Competition:** Innovation sets businesses apart from their competitors. By capitalizing on opportunities, businesses create unique offerings that differentiate them in a crowded marketplace. This distinctiveness becomes a compelling reason for customers to choose them over others.
- **Pioneering Industry Trends:** Organizations that consistently identify and seize opportunities become trendsetters rather than followers. They lead the way in introducing new concepts, technologies, and approaches, positioning themselves as industry thought leaders.

- **Building a Reputation for Excellence:** Innovation driven by opportunity identification elevates a business's reputation. When customers see a brand consistently introducing valuable solutions, they associate it with excellence and reliability.
- **Elevated Industry Leadership:** Businesses that excel in seizing opportunities and fostering innovation not only lead within their niches but also command respect and influence within the larger industry landscape.

For example, a tech startup identifies a gap in the market for sustainable tech products. By developing a line of eco-friendly gadgets, the startup not only differentiates itself from competitors but also pioneers a trend toward environmentally conscious technology.

d) Improve Decision Making

- **Strategic Resource Allocation:** Through thorough market opportunity analysis, businesses gain a comprehensive understanding of potential prospects. This informed perspective guides the allocation of resources, ensuring that investments are directed toward areas with the highest potential for return.
- **Minimizing Risk Exposure:** Informed decisions are inherently less risky. By basing choices on data, trends, and insights from opportunity analysis, businesses mitigate the risks associated with entering unfamiliar territories or launching new products/services.
- **Optimizing Return on Investment (ROI):** The alignment of resources with high-potential opportunities directly influences the **return-on-investment ROI**. Businesses that invest in areas identified through opportunity analysis stand a better chance of reaping substantial rewards and maximizing the effectiveness of their resources.
- **Forecasting and Planning:** Opportunity analysis provides a foundation for forecasting future trends and demands. Armed with this foresight, businesses can plan strategically, positioning themselves to capture market share and customer loyalty.
- **Niche Targeting:** In-depth opportunity analysis highlights specific segments with untapped potential. This allows businesses to tailor their strategies to cater to these niches, ensuring precision in marketing efforts and enhanced customer engagement.
- **Enhancing Long-Term Viability:** Decisions rooted in opportunity analysis not only deliver immediate benefits but also contribute to the business's long-term viability. This strategic foresight prevents reactionary decision-making and encourages sustainable growth.

For example, a software company identifies a growing demand for a specific type of business software. In response, the company allocates resources to research, development, and marketing of this software, optimizing resource allocation for maximum impact.

1.7 Business Opportunities in various sectors

There are innumerable opportunities exists in the business environment but one requires a vision to identify the available opportunities. Various business opportunities available are like following:

- **Textiles:** India is famous for its textiles from the very beginning and every region has its own unique style of dressing which thus offers a wide and diversified market. Moreover, India has a huge potential to grow as a market leader in the textile sector. Surat, Ludhiana etc. has emerged as an export hub of the textiles. Therefore, a better understanding of the textile industry and the customer needs helps in discovering the potential it holds.
- **Software:** India is having large number of the software engineers with leading business in software. With growing business in the software industry and the increasing business outsourcing from the foreign companies is providing tremendous opportunities for the entrepreneurs to invest in this sector.
- **Tourism:** It is one of the most promising and fastest growing industries as India has the potential for tourism development. India covers 15% of the world population and shares only 0.40% in the world tourism. It is not because of the lack of tourism in the country but because of the undiscovered tourism opportunities. Therefore, entrepreneurs can help in discovering the tourism potential as it is being estimated that India can become the number one tourist destination of the world.
- **Engineering Goods:** India is one of the largest exporters of the engineering goods. Therefore, entrepreneurs can earn by meeting the increasing demand of the engineering goods.
- **Automobile:** India has become a hub of producing low-cost automobile parts and is very rapidly becoming hot spot for the automobile industry. India is manufacturing large number of cars with strong engineering knowledge but still there is some undiscovered segments which offers the wide opportunities to the entrepreneurs.
- **Ayurveda and Traditional medicines:** India is known for its ayurveda and herbal products. With the increasing demand of the ayurvedic products, it is offering a unique business to the entrepreneurs.
- **Packaging:** Indian business is growing in every field like agriculture, consumer goods, infrastructure etc. So, there is a huge demand of the packaging material like plastics. So, there is a big opportunity for the entrepreneurs in this sector also.

- **Healthcare sector:** Indian healthcare sector is at the growing stage and with the growth in the medical tourism this sector will offer wide prospects for the entrepreneurs as there will be cost-effective treatments.
- **Media:** The media industry is offering a wide scope to the entrepreneurs. There is a boom in television, print media, advertising, radio etc from the past few years. Therefore, this sector is the most promising sector as it is about to grow at a double rate. According to the report of FICCI (Federation of Indian chamber of Commerce and Industry), innovation, marketing, Distribution, competition, digitisation etc will give boost to the media and entertainment sector in the coming years.
- **Floriculture:** With the growing demand for the fresh flowers, this sector is opening a new opportunity for the entrepreneurs. Although Indian Floriculture segment is small and unorganised, but as it has a huge potential and with the increasing demand one can think of business in this sector.
- **Toys:** this industry is the evergreen industry. India has the potential to make safe and cost-effective toys. Although China is giving a tough competition in this sector, but the Chinese toys contains toxics where India has an advantage to produce safe and durable toys.
- **Biotechnology:** After the software industry, biotechnology sector has the highest potential and offers opportunity for the entrepreneurs. It has been proved that agricultural biotechnology has a huge impact on the productivity. Therefore, huge importance is being given to the research and development to produce crops which are resistant to heat, cold, insects etc. It also helped in producing improved quality food products. With the increasing importance of the agro-biotechnology, it is providing various options to the entrepreneur to start a business in the field of horticulture, poultry, dairy, agriculture and production of fruits and vegetables.
- **Recycling Business:** E-waste is rising at an unmanageable speed with the development in the technology. According to the UN report, computer waste will grow about 500 % from 2007 to 2020, alone in India. Therefore, this alarming problem opening new business opportunity for the young entrepreneurs to manage e-waste and develop techniques to dispose the e-waste.
- **Energy Solutions:** India has a huge population and so are the consumption needs of the populated country. It is difficult for the nation to generate power with the limited resources. Therefore, in the power-starved nation like ours, there is a need of the cost-effective and power saving methods. Government has already initiated

steps to use cost effective methods by implementing the national Solar Mission. Therefore, solar engineering is a big opportunity for the entrepreneurs.

- **Organic Farming:** This sector is prevalent in India since long but with the increasing demands of the organic products especially in foreign is opening wide opportunity for the Indian entrepreneurs. Although farmers in India are focusing on the organic farming, but still are not able to meet the increasing demand. Therefore, there is a huge scope for the entrepreneur's rot invest in this sector and thus earning large benefits.
- **Corporate demands:** As large companies are opening their offices in India, therefore, there is a huge demand of the formal clothes. Moreover, there is an increasing trend of the corporate gifting, so one can try his luck in this sector also.
- **Social Ventures:** India is a hub of social problems. Social entrepreneurs are the persons who provide solutions to the social problems. Therefore, to provide solutions to the social problems, entrepreneurs have started their social ventures. For e.g.: SEWA, Lizzat papad etc. though it is one of the challenging tasks but is offering opportunity to the young entrepreneurs to step in.
- **Franchising:** After the Liberalisation, Privatisation and Globalisation in 1991, India is opened economy. Franchising helps in spreading brands all over the world. So, it is a good opportunity for the entrepreneurs to invest in franchisee business as it has well maintained image and low risk.
- **Education and Training:** Competition in the education is increasing. There is a good scope in the education sector and training sector with the increasing demand and competition. Students prepare endlessly for the competitive exams be it for the government exams or training courses. Therefore, entrepreneurs have the scope to provide the training and education facilities at the competitive rates. Moreover, India has the potential to attract students from the abroad which can open large opportunities for the Indian entrepreneurs in this sector.

1.8 Identifying a Business Opportunity

An entrepreneur should be the opportunity seeker and his most important task is to Identify, discover and to select the best business opportunity. A good opportunity must be capable of converting into a feasible project. An entrepreneur may come across multiple opportunities but he must select the most promising and possible opportunity because the success of the enterprise depends on the proper identification and selection of the project. Project Identification is the foremost step for starting a new business but is one of the most difficult tasks. Therefore, project identification is the process of selecting the few possible projects out of the several opportunities available. To identify the possible projects, one must go through the following steps:

a) Idea Generation: This is the first and most important stage in project identification. It is an intellectual process that requires vision, initiative, scheme and inquisitiveness. The Project idea can come out from one or more following sources:

a. Trade fairs and trade journals.

b. through experience of others in the business,

c. success stories of friends, relatives.

d. Surveys, reports, newspapers, periodicals.

e. detailed analysis of demand and supply

f. Government policies and support for the development of the various sectors.

e. Increasing demand of certain goods and services in the domestic market as well as foreign market.

f. Easy Availability of raw material, skilled labour

g. invention of new technology.

(i) Methods for Idea Generation: Idea can be generated with the help of the following methods:

- **Brainstorming:** This technique was originally used by Alex Osborn in 1938 in an American company to persuade innovative thinking in a group of six to eight people. Through this method many ideas are generated without any criticism. In this method, people are encouraged to produce as many ideas they can generate without any criticism and evaluation. It works on the principle of no criticism and quantity raises quality.
- **Focus Groups**: This group consists of 6-12 members belonging to different socio-economic backgrounds to focus on the matter. The group has a moderator to have the detailed discussion. Ideas are generated and detailed discussions are carried on to identify the excellent ideas.
- **Problem Inventory analysis**: This method is more like a focused group method but in this method along with generating ideas, it also considers the problem a product faces. In this method, focus group is provided with the list of the problems in a general product category and then identifying and discussing the problems of the products in that category.

Idea generation phase helps in opportunity scanning and opportunity identification and thus helps in identifying and idea and thus converting it into an opportunity. At the idea stage, there is a just an idea of what to do but at the opportunity stage, entrepreneur converts his idea into opportunity by gaining insight into what to do. For e.g.: Arjun and Raman are friends. Raman is working a company and Arjun is still searching for the job. Raman suggested Arjun to start a business, this is called an idea. Later, after analysing the various businesses, when Arjun has decided to go to start a transport business, then it is an opportunity. Therefore, this phase helps in identifying the opportunity.

b) Choose the Right Type of Business

Once the idea is conceived then prospective entrepreneur must go through the detailed analysis to choose the right type of business and must input his cost and time to examine the potential of his ideas. To analyse, he must:

a. study the environment of the product
b. prospects of the demand of the product.
c. availability of technology.
d. access to technical knowledge
e. access to the market.
f. availability of raw material and skilled labour
g. availability of customers
h. complexity of legal provisions

Identifying a business opportunity is complex and very risky task. Therefore, prospective entrepreneur must go through various analysis. Before selecting the best opportunity, an entrepreneur explores and analyse all business opportunities. For analysing the available business opportunities, following explorations can be done:

- **Environment exploration:** This means the study of the environment factors that has an impact on the business. This includes the study of the economic factors like gross domestic product, national income, per capita income, social factors like demographic features, lifestyle, values, beliefs etc. technological factors like, labour intensive technology, capital intensive technology etc. political environment like, political parties, stability of the government, personal interest of the politicians etc and the legal environment i.e. laws and regulations.,
- **Present business exploration:** this exploration is related to the present scenario of the business like the consumption pattern, demand pattern, income pattern etc.

1.9 Selection of Opportunity

As soon as the project identification ends, project selection starts. In the project identification phase, an entrepreneur may have identified different opportunities which he considers good for him. In this phase, he/she must select the best opportunity out of the identified ones which is most promising and most profitable under the given conditions. Project selection refers to the balanced choice of a project where the cost ratio is low and profits are more. This is the most important phase as the whole project depends on this phase only. The prospective entrepreneur should conduct SWOT analysis to select the best opportunity. He/she should analyse the strengths, weaknesses, competitive advantages (opportunities) and challenges (threats) offered by each of the idea. Based on this analysis, the most suitable project opportunity is selected. The prospective entrepreneur should select the best opportunity with the help of the following criteria:

- **Investment Size**: It means the cost of the project. In terms of Investment, an entrepreneurs should choose between the small scale, medium-scale and large-scale business based on the funds he can raise from the various sources and the amount he is investing. Entrepreneur should choose the project which suits best of his investment.
- **Location**: The location of the project should be such that which provides advantages. It should be such that is near to the market, transport facility is easily available. It should be at the places where there are the facilities of Industrial Development Corporation and other agencies. The proposed location should have variety of skilled and cheap human resources.
- **Technology:** Entrepreneur should give consideration to the technology required for the project. He/she should select the project which requires the verified and easily available technology.
- **Equipment**: An entrepreneur should choose the best equipment's for the project and should take the advice of the experienced consultant. The cost and quality of the equipment's should be within the budget.
- **Marketing:** An entrepreneur should choose the project which has wide scope to enter the market and can help in making good market share and profits. He should not go for the projects which are having cutthroat competition and are difficult to enter as a beginner.

- **Selection of the product:** An entrepreneur should select the product which he/she thinks will earn profits. He/she should take into account the government policies, present market size, demand etc.

1.10 Self-Check Exercise

1. What do you mean by opportunity?
2. What are the characteristics of opportunity? Discuss in brief
3. Why there is need for opportunity identification? Describe in short
4. Write a short-note on significance of opportunity selection.
5. How you can identify the business opportunity? Discuss in brief
6. Why selection of opportunity is essential? Write in brief.

1.11 Summary

An entrepreneur should give proper time and effort to identify and select the opportunity. Project Identification and Selection is half done in establishing enterprises. Most enterprises fail because of choosing the non-suitable opportunity or do not give due importance to the project identification and selection. Project Identification involves sources and methods of idea generation and Project Selection includes analysis of the identified projects with the help of SWOT analysis. Therefore, most suitable opportunity is selected to set up a new venture.

1.12 Glossary

- **Business opportunity:** It is an idea or a set of circumstances that make it possible to create or develop a profitable and sustainable business. This opportunity can arise in different ways, such as from a market need, a technological innovation, a change in consumer trends, a new regulation, among other factors.
- **Opportunity:** An occasion or situation that makes it possible to do something that you want to do or must do, or the possibility of doing something.
- **Opportunity Identification:** It is the process of finding a need or problem in the market that can be addressed with a product or service. This is typically done through research, brainstorming, surveys, interviews and focus groups.

1.13 Answers to Self-Check Exercise

1. For answer refer to section number 1.2.
2. For answer refer to section number 1.4.
3. For answer refer to section number 1.5.
4. For answer refer to section number 1.6.
5. For answer refer to section number 1.8.

6. For answer refer to section number 1.9.

1.14 Terminal Questions

1. What do you mean by opportunity? Discuss
2. Describe the various types of business opportunity.
3. What are the characteristics of opportunity? Discuss in detail.
4. Why there is need to identify the opportunity? Is it essential to identify and select a best opportunity for the success and growth of business? Describe.
5. What is the significance of opportunity selection? Describe

1.15 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
- Gupta, CB and P Srinivasan, Entrepreneurship Development, Sultan Chand and Sons, New Delhi
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- Robinson, P. J. (2017). A Guide for Writing Your Business Plan. Independently published
- Chandra, Prasana: Project Planning Analysis, Financing Implementation and Review. TATA McGraw Hill, New Delhi.
- Patel, Bhavesh M., Project Management, Vikash Publishing House Pvt. Ltd., New Delhi.
- Pitale, R.L. Project Appraisal Techniques, Oxford and IBH.
- Timothy, D.R. and Swell W.R. Project Appraisal and Review, McMillan, India.

Lesson 2

Business Plan

Structure

2.0 Introduction

A business plan refers to a formal statement of plans of an enterprise. It explains business goals of the enterprise and means to achieve those goals. It seeks to address the strengths, weaknesses, opportunities, and threats of starting a venture. The business plan differs from enterprise to enterprise depending on various factors, such as complexity in organizational structure, types of products and services, and demand for the product. However, the basic elements of a business plan remain the same. The business plan is often an integration of all the functional plans such as finance, marketing, manufacturing, and human resources. It helps the entrepreneur in both short term and long-term decision making.

In the words of Tariq Siddique, "If you are failing to plan, you are planning to fail." The definition explains the importance of a plan to succeed.

David Gumpert has defined a business plan as, "It's a document that convincingly demonstrates that your business can sell enough of its product or services to make a satisfactory profit and to be attractive to potential backers." In the view of Gumpert, a business plan is essentially a selling document that convinces the key investors that the venture has a real potential to be successful.

2.1 Advantages of Creating Business Plan

The advantages of creating a business plan are as follows:

- Encourages individuals to take into consideration all the aspects of business.

- Helps in obtaining the opinion of trusted and experienced external advisors on initial plans. It helps to identify the weaknesses, missed opportunities, and unsupportable assumptions, which further help in improving the prospects, reducing the probability of rejections, and chances of operational failure.
- Helps in formulating a proposed budget, as it involves proper financial forecasting. This further helps in matching the results with projections and inducing corrective measures on time.
- Forms an important document for creditors and investors, as they would always refer the business plan before investing.

2.2 5 Cs for Evaluation of Business Plan

An investor investigates the following 5Cs of an entrepreneurial venture while evaluating the business plan:

- **Capital:** Refers to the amount of money invested in the business by the entrepreneur
- **Capacity:** States whether the financial budget is realistic and sufficient
- **Collateral:** Refers to the security provided by the entrepreneurs
- **Character:** Refers to the trustworthiness of the entrepreneur
- **Conditions:** Signifies whether the environment is conducive for the purposed business. Helps in obtaining statutory permissions/approvals for starting a business.

Thus, it is essential for an entrepreneur to create a realistic business plan. The business plan should ideally be prepared by the entrepreneur. However, he/she may consult advisors, such as lawyers, accountants, marketing consultants, and engineers, to prepare an accurate plan.

2.3 Nature and Scope of Business Plan

A well-prepared business plan helps in gaining the trust of suppliers and various other parties and securing favourable credit terms. It states the vision, future of the enterprise, and products and services offered by it. This helps investors and lenders to take interest in the enterprise as both of them use the business plan to understand the new venture and relate it with the current market opportunities. Mark Steven, an advisor to small businesses aptly expressed the importance of the business plan in dealing with investors. In his words, "If you are inclined to view the business plan as just another piece of useless paperwork, it's time for an attitude change. When you are starting out, investors will justifiably want to know a lot about you and your qualification for running a business and will want to see a step-by-step plan for how you intend to make it success."

However, the business plan is not a legal document for raising the required capital. When it comes to a solicit investment, a memorandum is also needed. An entrepreneur uses the business plan to create interest of investors in the enterprise and then follow up with a formal offering of memorandum to investors, who are willing to invest in the enterprise. Furthermore, it helps in communicating the entrepreneur's vision to current and prospective employees of the enterprise. Thus, a business plan is used by both the insiders and outsiders, as shown in the following Figure:

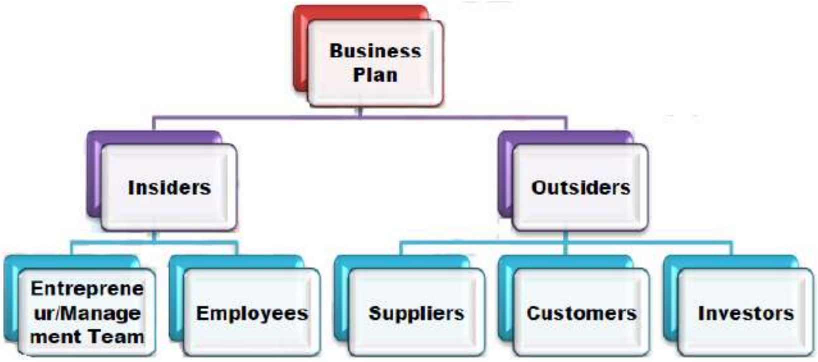


Figure: Users of Business Plan

2.4 Features of a Successful Business Plan

- Containing an executive summary, a table of contents, and chapters in the right order
- Exhibiting the right appearance and the right length-not too long and too short, not too fancy and too plain
- Providing a clear idea of what the founders and the enterprise expect to accomplish in the future
- Explaining the benefits of products and services to be given to customers
- Presenting hard evidence of the marketability of products or services
- Justifying the means that is selected to sell products or services
- Explaining and justifying the level of product development
- Providing the details of the manufacturing process and associated costs
- Portraying the partners as a team of experienced managers with complementary business skills
- Stating clearly how the entrepreneurs' products are better than that of its competitors
- Mentioning the superiority of the team members
- Containing realistic financial projections
- Providing a well-organized oral presentation

2.5 Drafting a Business Plan

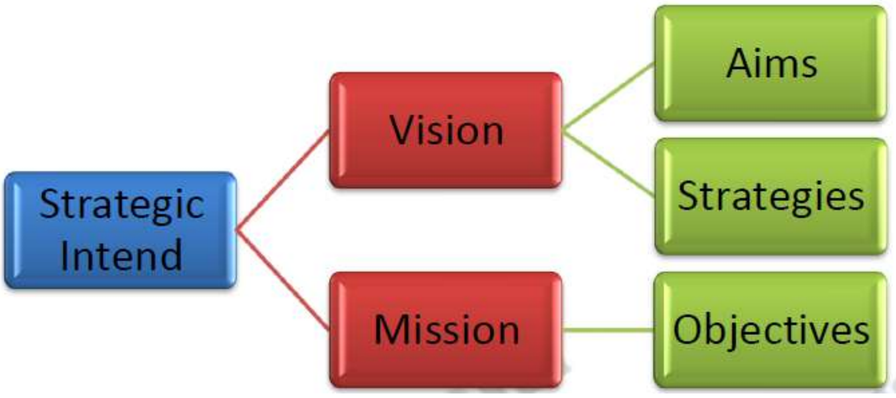
Creating a business plan is the first step of the planning process of an enterprise. An enterprise needs to conduct lot of research to develop an effective business plan. The elements of an effective business plan are explained as:

- **Title Page:** The title page of a business plan includes the name of the business, date, and the name, address, and contact number of the entrepreneur or the concerned person. The cover page can be simple or complex depending upon the choice of the entrepreneur.
- **Table of Contents:** The structure of the table of contents may vary from one enterprise to another depending upon the scale and nature of business operation. An entrepreneur generally prepares the table of content after adding all the features of the business plan. The table of content consists of main headings and sub-headings with related page numbers.
- **Executive Summary:** The executive summary is a brief summary of the entire plan, highlighting all important aspects of the plan in a concise and appealing manner. It contains basic information, such as the name of an enterprise and its location, nature of business, types of product or services, and financial requirements. The executive summary may also contain important points or news about the enterprise, which attract investors, suppliers, and other target audience. It is the most critical section from readers' point of view because people generally go through this to decide whether to read other sections. The executive summary should not exceed 3-4 pages and should be short and comprehendible. It should provide the technical, marketing, managerial, and financial details of the venture.
- **Description of the Business:** The business description presents the details of the business opportunity and the strategy to capture that opportunity. It contains a detail description of enterprise's background, country of origin, strengths of employees, stakeholders, products, and portfolio. The description of the enterprise comprises the historical background and current status of the enterprise as well as details about its products and services.

Different components of strategic management, such as enterprise's vision, mission, profile, and external environmental objectives, need to be considered before creating a business plan. A comprehensive study of these components helps in designing effective plans for the future of the enterprise. A process of building these components in a systematic manner is called strategic intent.

- **Strategic Intent:** Strategic intent is a process that helps the management team to set priorities, make decisions, and achieve the goals of the enterprise. These priorities, decisions, and goals are integrated to form the vision and mission statements of the enterprise. Following figure shows the process of strategic intent in an enterprise:

Figure: Strategic Intent



The importance of vision and mission statement is drawn in the following points:

- Infuses a common purpose throughout the enterprise. This statement helps in providing the direction of enterprise's goal to managers and employees.
- Enables superiors to delegate authority to subordinates and ensure whether the targets are fulfilled.

- **Product Description:** Product description involves information about the products or services offered by the enterprise. It helps customers to understand whether the product or service is as per their expectations. Important points to be included in product description are as follows:
  - **Product Specification:** Includes characteristics of the product related to a particular industry. For example, if a product relates to the manufacturing industry, it should be contain the ISO trademark. The product specification includes information about patents, copyrights, and trademarks owned by the enterprise.
  - **Production Process:** Includes information about the type of products manufactured by the enterprise. It also involves information related to inputs used to get the required output.
  - **Unique Selling Proposition (USP):** Refers to the competitive advantage or uniqueness of a product that would help in attracting customers.
  - **Quality Assurance:** Refers to the process of inspecting the quality of the product through various quality management system standards, such as ISI marks, ISO 9000:2000, Agmark, and Hallmark.

- **Market Plan:** A market plan describes how the product or service would be distributed, priced, and promoted. It involves the analysis the current market conditions and trends. The market plan involves critical marketing decision strategies and sales forecasting. Potential investors view the marketing plan as critical to the success of the new venture. Thus, the market plan should be comprehensive and detailed as much as possible, so that investors can clearly understand the goals of the enterprise and the strategies to be implemented to achieve these goals effectively. Marketing planning is an ongoing requirement for the entrepreneur, which serves as a road map for short-term decision making.
- **Equipment and Material Description:** An entrepreneur needs to provide a clear description of the equipment and materials required to carry on the operations of the enterprise. Equipment and materials include plant, machinery, and raw materials that act as inputs to produce the output (product). They form the most expensive purchases of an enterprise. An entrepreneur makes an advance payment to get customized some parts of the machinery as per his/her requirements. He/she should aim to achieve cost minimization and timely delivery of the materials while purchasing the materials and equipment. An entrepreneur should have good bargaining skills to get customized machinery at optimal cost.
- **Operations Plan:** An operations plan involves actions that need to be taken to make the efficient use of resources and processes. It includes information about the following:
    - **Capacity Planning:** Determines the maximum amount of work that an enterprise can do in a given period of time. Generally, enterprises forecast the capacity utilization over the years and make targets to attain the final capacity utilization level. For instance, if an enterprise's current capacity is 40% within one year and it aims to attain 60% of the capacity, then it needs to perform proper capacity planning and make judicious use of resources.
    - **Personnel:** Refers to the human capital of an organization. The success or failure of an enterprise depends on the efficiency of its human resource. Therefore, the enterprise strives to adopt efficient human resource management system, so that the growth and development of employee is possible.

  Therefore, operations planning provide a map for resource and personnel planning.
- **Management and Organizational Plan:** Management and organizational plan provides information background, skills, abilities, and competencies of an entrepreneur

or the management team. It also contains information regarding the form of ownership of the enterprise and its organizational structure. For example, if an enterprise is running in partnership, the details of its partners, their names, and designations must be provided in the management and organizational plan. In addition, the management and organizational plan should also contain description about roles, responsibilities, and authorities of individuals in the enterprise. This can be explained easily with the help of a tool called organizational chart.

Management plan also includes human resource policy and its strategies, such as recruitment and selection policy, promotion and increment, retention policy incentives, or motivation. Thus, management and ownership forms the most essential part without which the process of planning in an organization cannot be implemented.

- **Financial Plan:** A financial plan constitutes an important component of the business plan. It provides financial information and startup timeline for the business. An entrepreneur needs to raise sufficient amount of capital for starting a business. Businesses require capital to purchase fixed assets, such as land and machines, and to meet day-to-day expenses. In case of small enterprises, funds can be raised through own savings; however, in case of large enterprises, funds have to be raised by public, commercial banks, and financial institutions. Therefore, the entrepreneur is required to generate financial forecasts to raise finances. These forecasts help in calculating the amount of funds and debt financing required to carry on the business. These further help in planning the potential return on investment.

  The financial portion of a business plan must be examined closely by all the partners and investors. Thus, accurate financial projections attract investors, lenders, and serve as a guide to future business decisions. The importance of financial planning is shown in the following points:

  - Acts as an integral part of corporate planning for the business
  - Ensures adequate funds from various sources for smooth conduct of business
  - Attempts to achieve a balance between the inflow and outflow of funds
  - Ensures adequate liquidity throughout the year
  - Leads to minimization of waste of resources

Financing any new venture can be done in the following two ways:

- **Debt Financing:** Refers to an interest bearing investment that needs collateral security, for example, loans

- **Equity Financing:** Offers investor's ownership to the extent of size of investment and does not need collateral security, for example, shares

Financial decisions are required with respect to the following:

- The amount of long-term capital required
- The cost of raising funds
- Determination of optimum capital structure
- The estimation of return on investment

Thus, these decisions involve making financial forecasts that require projections for three to five years. These projections include:

- **Income Statement:** Refers to a profit and loss statement, which shows the cash management of the enterprise by subtracting expenses from receipts.
- **Cash Flow Statement:** Shows all cash receipts and expenses. Cash flow is crucial for the survival of any business.
- **Balance Sheet:** Shows assets, liabilities, and retained earnings. It indicates the value of the cash position and owner's equity at a given point.
- **Break-even Analysis:** Shows the volume of revenue from sales that are needed to balance the fixed and variable expenses. It is a no loss-no profit point.
- **Key Financial Assumptions:** Includes assumptions about expected cash flow in an organization, market share, and rate of return. For example, an enterprise can assume that its product would be able to capture 40% of the market and then can make plans and decisions about the investment and marketing strategies.

Financial forecasts are mostly set up on yearly basis. The yearly plans are divided into quarterly or monthly plans. These projections and forecasts form an essential part of a financial portfolio; therefore, it is required to make sure that they are valid, realistic, and accurate.

- **Contingency Plan:** A contingency plan mentions all the anticipated risks associated with a business and ways to mitigate those risks. One of the most important characteristic of an entrepreneur is that they are risk takers. Risks are the most important part of the business. Ignorance of the risks may lead to a negative impact on the operations or profitability of business. Risks can arise from the following two types of factors:
  - **Internal Factors:** Refers to the controllable factors of an organization. For example, if the manufacturing plants of an enterprise are not operating at optimum

efficiency, then the enterprise can correct it by revamping the operational structure of plants. These factors can be identified and corrected easily.

- **External Factors:** Refers to the factors that are beyond the control of an enterprise and may affect its financial condition. For example, threat of new entrants in business and uncertainties, such as natural disasters.

Every entrepreneur should have the ability to identify the risks and have readymade solutions to avoid the risks. The various types of risks faced by an entrepreneur are as follows:

- **Economy Risks:** Refer to the risk associated with the economy in which business operates. For example, inflation and recession.
- **Industry Risks:** Refer to the risk associated with the industry in which business operates. For example, competition and change in government policies
- **Internal Risks:** Refer to the risk unique to the business and are controllable in nature. For example, lack of funds and managerial skills.

The different measures taken by enterprise to mitigate risks are as follows:

- **Risk Avoidance:** Implies avoiding the activities involving risk. For example, an entrepreneur avoids the liability that he/she feels may affect negatively in future, if he/she is unable to pay it back.
- **Risk Reduction:** Implies using various methods to reduce risks. It lessens the possibility of loss from occurring. For example, enterprises use fire extinguishers to reduce the risk of loss arising from fire.
- **Risk Transfer:** Implies transferring the risk to the other person or party. It can be done by the purchase of an insurance contract, which helps in transferring the risk. For example, marine insurance covers the loss of damage of ships, cargo, and any transport or property by which cargo is transferred.
- **Risk Retention:** Implies accepting the loss when it occurs. All types of risks that cannot be avoided or transferred are retained, by default. This includes risks that are so large that they cannot be insured. For example, emergence of a war can lead to loss of property, which has to be retained by individuals. In most of the cases, property is not insured against war.

Every business involves a certain amount of risk. Therefore, an entrepreneur should have the ability to identify the risks, evaluate the critical risks, and make realistic contingency plans.

- **Implementing a Business Plan:** After developing the business plan, the next important step is to execute it. An enterprise communicates the progress of activities carried according to the plan, to its employees. This helps the enterprise to achieve its key objectives and mission. A business plan guides the entrepreneur throughout the entrepreneurial process. In the implementation phase, the entrepreneur arranges the essential resources, such as men, machine, and material, to achieve the set objectives. Next, he/she assigns tasks to employees to meet the goals and ensures that the assigned tasks are performed efficiently. Lastly, the entrepreneur ensures that objectives projected in the business plan are achieved effectively.

2.6 Self-Check Exercise

1. What do you mean by business plan?
2. Write a short-note on advantages of creating business plan.
3. Discuss in brief the nature and scope of business plan.
4. What are the features of successful business plan? Discuss in brief.
5. Write a short-note on drafting a business plan.

2.7 Summary

In this module, you have learned the importance of developing a business idea before setting up an enterprise. An entrepreneur needs to take into consideration various factors, such as size and location of the enterprise, before setting up an enterprise. In addition, the module has detailed upon the significance of generating a business plan and the procedure of implementing it.

2.8 Glossary

- **Business plan:** It is a documented strategy for a business that highlights its goals and its plans for achieving them. It outlines a company's go-to-market plan, financial projections, market research, business purpose, and mission statement.
- **Plan:** These are design, plot, project, and scheme. While all these words mean "a method devised for making or doing something or achieving an end," plan always implies mental formulation and sometimes graphic representation. plans for a house.

2.9 Answers to Self-Check Exercise

1. For answer, refer to section number 2.1.
2. For answer, refer to section number 2.3.
3. For answer, refer to section number 2.3.
4. For answer, refer to section number 2.4.

5. For answer, refer to section number 2.5.

2.10 Terminal Questions

- What do you mean by business plan? Discuss
- What are the advantages of creating business plan? Describe with the help of suitable example.
- Why 5 Cs are important? Discuss.
- Describe the nature and scope of business plan.
- What are the features of successful business plan? Discuss
- How you can draft a good business plan? Discuss

2.11 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
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- Ramachandran, K. (2014). Entrepreneurship Development: Indian cases on Change Agents. Tata McGraw Hill.
- Robinson, P. J. (2017). A Guide for Writing Your Business Plan. Independently published
- Chandra, Prasana: Project Planning Analysis, Financing Implementation and Review. TATA McGraw Hill, New Delhi.
- Patel, Bhavesh M., Project Management, Vikash Publishing House Pvt. Ltd., New Delhi.
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Lesson 3

Project Management

Structure

3.0 Introduction: Project

Effective management of projects is vital for the development of an economy because it is the result of a series of projects managed successfully. This makes project management an extremely important key area for a developing economy such as India. Project management is rapidly becoming an exciting new profession. It is a specialized branch of management which makes it different from others based on a variety of factors which include the organisation structure, planning process, quality of control, human relations etc. Every project requires a professional and peculiar approach to ensure the success of the project. This peculiar approach can be termed as project management. The success of the project depends upon timely completion of the project, within the framework of allocated budget and it must perform up to the desired satisfaction. An ideal project is one which is carefully selected and prepared, thoroughly appraised/analysed, closely supervised and consistently evaluated.

Project management deals with project identification, formulation and appraisal of the project. These three aspects formulate the foundation for the success of projects.

3.1 Learning Objectives

After studying this lesson, students should be able to understand the:

- Concept, meaning, types characteristics and life cycle of a project.
- Concept, meaning, importance of project management.
- The meaning, roles and responsibilities of project manager.

3.2 Meaning of a Project

The PMBOK (Project Management Body of Knowledge) has defined a project as "A temporary endeavour undertaken to create a unique product, service, or result". It is usually a one-time activity with a well-defined set of desired end results. There is a rich variety of projects we used to hear like iron and steel projects, power projects, cement projects, refinery projects, fertilizers projects etc. where the term „project" is common to all the plants. In each case, the „project" is used for the plant but after becoming the plant operational, the project is said to be completed. In another case, say the project for methods of improvement. The project is deemed to be completed when methods of improvement has been achieved. Thus, it is not necessary that the term "project" is always specifically used as project. Take the examples of Lok Sabha/Assembly or Panchayat elections. A project is neither a physical objective nor an end result-but one which is to do with goings. It includes:

- any non-repetitive activity;
- a low-volume, high variety activity;
- a temporary endeavour undertaken to create a unique product or service;
- any activity with a start and finish;
- A unique set of co-ordinated activities, with definite starting and finishing points, undertaken by an individual or organisation to meet specific performance objectives within schedule, cost and performance parameters.

To understand what a project is, let us study how a project is conceived. Project identification is the first stone to be laid down in setting up an enterprise. It is not possible for anyone to come up with an idea and at the very first time, convert it into a business opportunity and start a business on that basis. Persons who are interested to become entrepreneurs must have the ability to generate many ideas so that at least one of the ideas has the potential of business opportunity and adopt a series of steps to finalize it into a profitable business. A project, in very simple words, is a plan or idea intended to be carried out. The success or failure of an enterprise depends on its identification of the project.

In today's competitive environment, every enterprise is looking for good business opportunities for expanding the existing business or setting up new conglomerates. Idea generation is the first step for the growth of business. The idea must be technically, economically, politically and socially feasible. Once the idea passes these tests, an investment proposal is made. When the investment proposal is approved, the project commences. The concept of term „Project‟ can be defined with the help of following definitions:

- Project is a one shot, time limited, goal oriented, major undertaking, requiring commitment of varied skills and resources, a combination of human and non-human resources pooled together in a temporary organisation to achieve a specific purpose. **Project Management Institute of America (PMIA)**
- A project is whole complex of activities involved in using resources to gain benefits.**-Gillinger**
- A project can be defined as a non-routine, non-repetitive one-off undertaking normally with discrete time, financial and technical performance goals. **-E.L.Hanson**

3.3 Characteristics of a Project

The various characteristics of a project are discussed as under:

- **Well defined objectives:** Every project must have well defined set of objectives. No project can be without set of objectives. Once these objectives are accomplished, the project ceases to exist. That a project is deemed to be completed when the whole things are completed and performing satisfactorily.
- **Life Span of the Project:** A project has a limited span of time. It cannot go on and forever. The life of the project may be a few days, a few months or a few years but it cannot continue endlessly. It must come an end. Normally the accomplishment of given set of objectives represents the end of the project.
- **Single Entity:** A project is generally treated as one single entity. Instead of contributions from many different people, it can still be regarded as one whole thing. The activities may be performed by different people, but all activities are interrelated and are being performed to serve a common purpose.
- **Team Work:** A project is single entity and calls for team work. For the successful implementation of planning and strive towards achievement of common goal, the activities of different people are integrated and coordinated. Everyone should feel

important and contribute towards the attainment of common goal. The spirit of oneness makes everyone feel important contributing to a big cause.

- **Life Cycle:** Every project has its own life cycle which starts from growing stage, maturity stage and declining stage. All the stages are closely linked with each other and provide the logical reasoning for the beginning of next stage. The declining stage provides the basis for the renewal of the project. The principal stages of the cycle are the identification of a project, its design, preparation and appraisal, its implementation and its evaluation.
- **Uniqueness:** Each project has its unique characteristics. It can be exactly similar with any other project even if the plants are identical. The location of the project, its infrastructure, human resources and various other agencies make each project unique.
- **Change:** A project keeps on changing throughout its life cycle i.e. at different stages of completion. Sometimes these changes are routine changes, while some changes may be major which can change the very nature or character of the project.
- **Successive Principle:** There is a big gap between the dream and reality. Similarly, what is going to happen in the next stage of the life cycle of the project is not known at any stage. Therefore, a project is successive in nature. Sometimes the practical challenges are known only when the project is implemented.
- **Customer Centric:** A project should be customer centric. It is always made to the order of the customer. It is made to order because the requirements of each project are very much different. The customer puts their own conditions and stipulates various requirements in terms of time, cost and quality, within which the contract must be executed.
- **Unity in Diversity:** A project is a unique and a complex set of incalculable varieties. These varieties may be in terms of technology, material, equipment, machinery, human resources, work culture and ethics etc. But in spite of diversities, all activities of the project are interrelated and coordinated in such a manner that it strives for the attainment of common goal of the project.
- **Risk and Uncertainty:** A certain degree of risk and uncertainty associated with every project. The degree of risk and uncertainty depends on how a project has been passed through the various life cycle phases. A well defined project will have the least degree of risk and uncertainty.

- **Sub-Contracting:** For the successful completion of the project, it requires the services of many specialised persons. A high percentage of work is done through sub contractors depending upon the complexity of a project.

3.4 Types of Projects

A project may be classified in different ways. The major categories are described as follows:

a) Income Yielding Projects: These are also called profit earning projects and refer to all those projects which enable the concern to earn profits. They lead to increase in sales volume and productivity and tend to reduce cost of production. Such projects may be sub classified as below:

- **Replacement Projects:** Which involve replacement of the existing fixed assets. Replacement must be done because the assets being used have become depreciated, worn out and out dated. Usually, replacement funds are created for timely replacement of such assets.
- **Expansion Projects:** Which increase the existing capacity or add a new product line. A careful estimate is to be made regarding expansion programmes.
- **Miscellaneous Projects:** Which include such items of capitals expenditure as research, development and innovation projects, cost control and cost reduction schemes etc.

b) Non-Profit Projects: The need may arise to incur expenditure on some permanent items, the object of which is not to earn profit. This must be done to comply with the instructions of the government, municipal committee, labour department and other law enforcing agencies. Provision of exits, exhaust fans, firefighting equipment, an effluent clearing plant, safely helmets for workers etc. are some of the examples of such expenditure.

c) Projects on which a Return is difficult to measure: There are certain projects which certainly affect the profitability and productivity favourably but it is difficult to assess the income yielded by them. Brown and Haward have given the following list of such projects:

- **Mandatory projects:** The projects which are required to comply with some statutory requirements are called mandatory projects.
- **Service department projects:** The provision of buildings or equipment for non-manufacturing departments may be essential but the return cannot be evaluated.
- **Welfare projects:** Provisions of sports facilities for employees may contribute to raise employee morale, which cannot be evaluated financially.

- **Research and development (R & D) projects:** The projects which may be initiated to improve company's methods or products. It may prove unsuccessful or may show no measurable return for a considerable time.
- **Educational projects:** Provision of a company training course may be instrumental in improving the efficiency of staff but here again results would be difficult to evaluate.

d) **Sectoral Projects:** According to Indian Planning Commission, these projects are sector specific projects and may fall in any one of the following categories:

- Agriculture and Allied Sector
- Irrigation and Power Sector
- Industry and Mining Sector
- Transport and Communication Sector
- Social Services Sector
- Miscellaneous Sector

3.5 Project Life Cycle

Every project has a life span which may be divided into various broad phases. The attention that a particular project receives is not uniformly distributed throughout it life span, but varies from phase to phase. It is, therefore, necessary to study the various phases in the life of a project. Each project has five stages from start to end. These stages are:

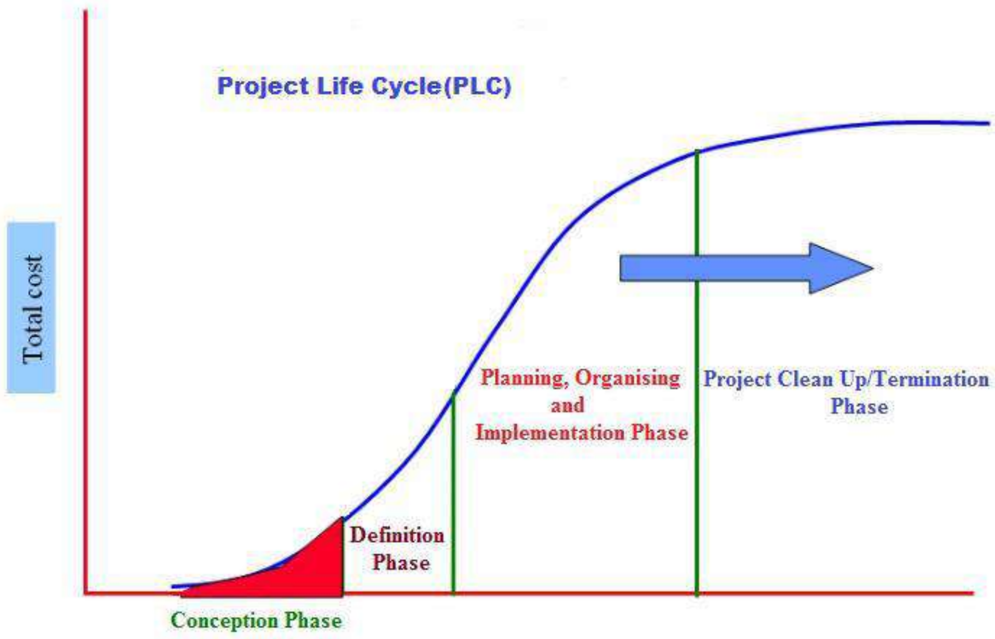

Figure: Project Life Cycle

Though all projects do not follow this sequence and the span of each phase is not definite which is estimated by the experts. It depends upon various factors like the location of plant, the type of product/service, layout of the project, manpower needs, financial requirements etc. These phases are as:

Stage-1-Conception Phase: This is the phase during which the project idea is conceived. The idea may be generated in the mind of entrepreneur while tackling and solving many problems of the business. These problems may be non-utilisation of available funds, plant capacity, technology, man power, expertise or expectations of the existing customers from the enterprise. Whatever the situation, the ideas must be put in writing and given some shape before these can be considered and compared with competitive ideas. The ideas have to be examined carefully in the light of objectives and constraints. The acceptable idea will form the basis of a future project. A well-conceived project has a long life after its successful implementation.

However, the real-life situations may be different as compared to what may have been assumed. Therefore, no original idea goes into operation in its original form. Conception is an important phase in the life cycle of a project. An entrepreneur must analyse deeply all facts, objectives and constraints before starting of a project because an unsuccessful project may become a liability for the enterprise instead of being an asset.

Stage-2-Definition Phase: In the phase the idea generated during the conception phase is developed. Facts relating to the idea are collected and presented. A document is produced describing details of the project, necessary information relating to customers or financial institutions to make up their minds on the project idea. The following are the key areas to be examined during this phase:

- Quality and quantity of raw materials
- Calculations as to the size or capacity of plant o Location and the site of plant
- The technology to be employed or Layout of project
- Layout of plant and machinery or Civil engineering works
- Manpower requirements or financial requirements
- Schedule of implementation

Further in-depth studies can also be asked for. If this phase is not properly done, it will increase the risk content of the project. And sometimes hasty decisions may prove disastrous for the project. Therefore, a project is brought into existence only when its idea has been properly conceived, analysed in the definition stage for its successful implementation.

Stage-3-Planning and Organising Phase: Although this phase starts after definition phase, but in practice it starts with the conception of an idea. Planning, as it is often defined, is making the decision in advance. If planning is not properly done, it may fatal the objective of starting a project. During this phase the firm deal with the action steps to convert its ideas into reality.

Some organisations also prepare „Project Execution Plan" for the successful implementation of the project. The important aspects cover in the plan are:

- Project infrastructure and supporting services o Scheduling and Budgeting
- Human Resource Planning
- Licensing and governmental clearances o Financial Requirements
- Systems and procedure
- Identification of project manager o Site preparation and investigation
- Construction resources and materials o Work packaging

Generally, this phase is taken as part of the implementation phase because this phase is not confined to documentation or merely paper work but lot of other activities which are important for the project are organised under this phase. Various aspects viz. marketing, technical, financial, economic and ecological are analysed in detail.

Stage-4-Implementation Phase: This is a very important phase of the project where the people see the project first time. Implementation phase for a project involves setting up of manufacturing facilities. It consists of various activities:

- Project and engineering design
- Negotiations and contracting
- Ordering of equipment's
- Construction Training
- Plant Commissioning
- Testing and checking

Implementation phase is a very complex, time consuming and risky. It has a high need for coordination and control. All techniques of project management are applied for the successful implementation of the project.

Stage-5-Project Clean-up/Termination Phase: This is a transition phase in which projects starts working. This phase is considered as clean-up because the project personnel have to perform clean up task like drawings, documents, files, operation and maintenance manuals, catalogues are given to the clients or the owners of the project. To satisfy customers, clients and contractors, the experts are to undertake many test-runs. The most important task during this phase is to plan about retaining of certain employees involved in the execution of the project. All project personnel cannot be suddenly asked to go. The first among the employees to move are the design engineers. Most of them move to new project sites because the same people will never be required again at that site till a new project comes and rest are retained at field for residual engineering.

3.6 Concept of Project Management

Project management is a special branch of management which is different from others based on a variety of factors which include the organisation structure, the process of planning and control, human relations etc. It is basically aimed at producing an end-product that will result some change for the benefit of an enterprise. It is the initiation, planning and control of host of activities required to deliver this product which could be a physical product or new software or a new way of working etc. Every project requires a special approach to ensure the success of a project. This special approach can be termed as project management. The success of a project means that the project must be completed within budget, within allocated time and must perform to satisfaction. Project management fulfils these demands. There is a difference between project management and simple management. A key factor that differentiates project management from just management is that it must deliver within a finite time span whereas management is an ongoing process. Therefore, a project manager needs a special kind of skills to handle and tackle various problems like technical skills, interpersonal skills and good business awareness.

Project management is the planning, consistent monitoring and control of all aspects of the project to achieve the organizational objective within a definite time span and to the specified cost, quality and performance. Project Management is the art of managing all the aspects of a project from start to finish using a scientific and structured methodology. It is the application of knowledge, skills, tools, and techniques to all activities of the project to meet the project requirements. The project management processes fall into five groups:

- Initiating
- Planning
- Executing
- Monitoring and Controlling
- Closing

Project Management is a unique discipline where different people work in a group with helping hands for the attainment of a common goal, keeping the total perspective in focus all the time. Project management is based on the holistic approach and focuses on results. Project management approach should have some special features like flexibility, free communication, regular feedback and adaptation to changing requirements of work and environment. This approach helps to improve production standards and delivers goods better than others even in complex and technical projects.

An ideal project is one which is carefully selected and prepared, thoroughly appraised/analysed, closely supervised and systematically evaluated. Project Management deals with project identification, formulation and appraisal. These three aspects formulate the foundation for the success of projects. The concept of term 'Project Management' can be defined with the help of following definitions:

The planning and organization of an organization's resources in order to move a specific task, event or duty toward completion. Project management typically involves a one-time project rather than an ongoing activity, and resources managed include both human and financial capital. **-Dictionary of Investopedia**

Project Management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. **-Project Management Institute (PMI)**

3.7 Tools and Techniques of Project Management

There are several techniques contributing towards effective project management. These are grouped under the following heads:

a) Project Selection Techniques:

- Cost Benefit Analysis and
- Risk and Sensitivity Analysis

b) Project Execution Planning Techniques

- Work Breakdown Structure (WBS)
- Project Execution Plan (PEP)
- Project Responsibility Matrix

c) Project Scheduling and Co-ordinating Techniques

- Bar Chart
- Life Cycle Curves
- Line of Balance and
- Networking Techniques (PERT/CPM)
- Progress Measurement Technique (PROMPT)
- Performance Monitoring Techniques (PERMIT)

d) Project Cost and Productivity Control Techniques

- Productivity Budgeting Technique
- Value Engineering
- Control Room
- Computerized Information System

3.8 The Project Manager

To make the project successful it must be managed by a competent project manager. He takes the responsibility for planning, implementing, and completing the project. The project manager strives to maintain the progress and productive interaction with various parties in such a way that overall risk of failure is reduced. He is in direct touch with clients and must determine and implement the strategies to meet the requirements of the clients. He is instrumental in ensuring the satisfaction of clients. The basic job of the project manager is to visualize the entire project from inception to closure and to have the ability to ensure that this vision is realized.

There are certain issues regarding the qualification, experience and practical knowledge of project manager. Most of the project managers including the successful ones come from leading business schools. But some succeeded and others not. The project managers who succeeded are very few in percentage because in Indian only a handful of projects are completed timely, within budget and performed according to expectations. Although the failure of these projects has been analysed in various seminars, conferences and workshops but still the role of project manager could not form the subject of serious discussions.

3.9 Roles and Responsibilities of Project Manager

Managing projects requires application of knowledge, skills, tools and techniques to project activities to meet the project objectives. The project manager does this by performing some tasks at various stages of the project. Each aspect of a project is managed by using the corresponding knowledge area. These knowledge areas are discussed in detail as follows:

a) Integrating and Managing Project Activities: The project is initiated, planned and executed in parts. There is need to coordinate different activities of the project. Project manager is required to introduce integration management system so that all these activities should be properly managed. He is concerned with identifying and defining the work of the project and then combining and integrating with the appropriate processes. For integrating the different activities, a proper integration management is required to introduce which may include the following activities:

- Developing the project charter.
- Developing the project management plan. o Directing and managing project execution. o Monitoring and controlling project work. o Performing integrated change control.
- Closing the project or phase of a project.

Thus, while managing all the aspects of the project, the project manager needs to coordinate different activities and groups.

b) Defining the Scope of the Project: The main objective of the project management is the successful implementation of the project. Therefore, project manager has to ensure accomplishment of the project by defining and controlling various activities of the project. For completing this task, he must define the scope of the project, which may include the following:

- Collect the requirements of the project from the clients and determine the project scope accordingly.
- Develop the description for the project and its products.
- Decompose the project deliverables into smaller but more manageable work components.
- Plan how the completed deliverable of the project will be accepted.
- Control the activities which may change the scope of the project.

So, a project manager defines the work required to complete the project. He is also responsible for the timely completion of the project. Therefore, he has to manage the resources as well.

c) Project Time Management: The primary motive of the project manager is to develop and control the project schedule. Every project has a timeline by which it is expected to be completed. It is the responsibility of the project manager to complete the project within a scheduled timeline. For achieving this objective, he must perform various functions which are given as under:

- Identify all the work activities that need to be scheduled to produce the project deliverables.
- Estimate the types of resources needed for each schedule activity.
- Estimate the time needed to complete each scheduled activity.
- Develop the schedule
- Control changes to the project schedule.

Although project manager takes care of all requisite parameters to manage the timeliness of the project effectively but it is found that he finds it difficult to get the project completed on time. This usually happens due to many factors. So, an efficient manager should ensure that the project will be completed on time.

d) Estimating and Controlling Cost: It is the duty of the project manager to estimate the project cost and complete it within the approved budget. It is an important task of project manager because if the actual expenditure would increase the budgeted figures, he is answerable to the top management. Therefore, for implementing effective cost management system, a project manager must take care the following components:

- Estimating the cost of the project.
- Aggregate the cost of individual activities.
- Comparing the actual cost with the budgeted.

- Monitoring and controlling the cost variance in the project execution and take the corrective action in case of adverse variance.

Generally, value engineering and life-cycle costing is used to determine options and optimise the process.

e) Ensuring Project Quality: A project manager has to ensure project quality. Project quality is defined as the degree and standard to which a project satisfies its objectives and requirements i.e. it must be completed on time and with all the work in the project scope completed within the planned budget. While managing the quality the following activities should be done:

- Determine the quality requirements and standards that are relevant to the project.
- Ensure the planned quality requirements and standards are applied.
- Monitor the quality activities and record the results of these activities in order to assess performance and make necessary recommendations for corrective actions and changes.

f) Managing Human Resources: Human resource management involves planning, organising and controlling the procurement, development, compensation, maintenance and integration of human resources of an organisation. The primary task of the project manager is to obtain, develop and manage the project team that will perform the actual project work. He must ensure that following activities under this:

- Identify the roles and responsibilities at every stage of the project. o Assign duties and delegate the authority for reporting.
- Manpower planning: he must decide beforehand as to what type of persons they are to be recruited and in what numbers, they are required.
- Obtain the human resources needed to work on the project.
- Develop interpersonal skills and team spirit among the team members.
- Track the performance of team members, get the feedback and resolve the issues and conflicts. While solving the issues, he should not be biased.

g) Procuring Raw Materials: Project procurement is used when it is necessary to purchase or acquire products, services, or results needed from outsiders. Generally, the project team is working on behalf of the customer, and suppliers are responsible for the creation of the project deliverables or products. There can be both internal and external suppliers. A project manager must perform the following activities for procurement:

- Identify purchasing needs, specify the procurement approach, and identify potential sellers.

- Obtain the responses from the interested sellers, select the sellers and issue them contracts.
- Establish relationship with potential sellers, monitor the procurement performance and control changes in procurement.
- Complete the procurement process by accepting the product and closing the contracts.

h) Communicating Information to interested Parties: A project manager needs to communicate all important information to the interested parties or its major stakeholders. For the success of the project such information should be generated and distributed timely to all the stakeholders involved. Communication is the most important aspect of a project and the most important skill of a project manager. In the absence of a proper communication system, a project cannot be completed successfully. Communication management includes the following:

- Identify all potential individuals, groups, and organisations that will be interested in the project and find relevant information about them.
- Determine the information and communication needs of the project. Also decide which communication approach should be used.
- Make the required information available to the project stakeholders in a timely fashion.
- Communicate and work with the stakeholders, meet their needs, solve the issues and manage the expectations within the scope of the project.
- Communicate performance information to the stakeholders.

3.10 Managing Project Risk

Every project has some uncertainties that give rise to project risks, which need to be managed. A project risk has direct relationship with the project objectives whether it occurs positively or negatively. The primary duty of the project manager is to identify the risks involved in the project and respond to them when they occur. A project manager has to perform various activities to minimise the project risks which are given as follows:

- Plan how to determine and execute the risk management tasks.
- Identify the risks relevant to the project and determine its characteristics.
- Assess the probability of occurrence and the impact for each risk.
- Estimate the effects of identified risks on project objectives.
- Develop action plan to maximise opportunities and minimising threats from the identified risks.
- Regular monitoring of risks, implement risk response plans and evaluate the effectiveness of risk management system.

Thus, it is the duty of the project manager to implement proper risk management system to meet the project objectives.

3.11 Importance of Project Management

The growth of project management is increasing rapidly around the globe which makes project management important. The following are major reasons why project management is important to modern businesses:

- **Unique Venture:** A project is a temporary and unique venture which is required to be completed within a scheduled time. It is aimed at producing a unique product/service or process. Therefore, a project manager, without having any blueprints to develop the product, with his ability, skill, knowledge and expertise develop the plans and execute it for the successful completion of the project.
- **Specific Skills:** The success of the project depends upon many integrated and coordinated activities of various departments or aspects of the project. For the successful implementation of the project, a project manager must arrange various resources. Therefore, he must be a skilful person who is acquainted with the knowledge of management techniques specific to dealing with one-time projects. The enterprises that use project management to monitor and control processes and schedules can more effectively complete their projects on time and within budget.
- **Scheduled Completion:** Every project has a timeline by which it is expected to be completed. An efficient manager should ensure that the project will be completed on time. Creating a project timeline requires coordinating project activities in conjunction with the ongoing business activities. The whole project is divided into different stages/phases and each phase is required to be completed on time.
- **Scope of the Project:** The main objective of the project management is the successful implementation of the project. The primary purpose of project management is to ensure that all the required work is performed to complete the project successfully. This is accomplished by defining and controlling what is included in the project and what is not.
- **Project Budget:** A budget is an estimation of income and expenditure for a given period. Project management helps in keeping projects on budget. A good project management identifies anticipated costs early on to develop a realistic budget. Budget needs coordinated efforts of various departments to reduce overall cost of the project.

- **Target Oriented Human Resources:** Project management ensures the accomplishment of the objectives of an enterprise. Project based enterprises focus on goals and outcomes rather than working according to the clock. Therefore, working in those organisations stimulates human resources to work harder with their creative and innovative ideas.

3.12 Self-Check Exercise

1. What do you mean by project?
2. Write a short-note on characteristics of project.
3. Discuss in brief about types of projects.
4. What do you mean by project life cycle? Discuss in short.
5. Discuss project management in brief.
6. What are the responsibilities of project manager?
7. What is the importance of project management?

3.13 Summary

Project management is rapidly becoming an exciting new profession. It is a specialized branch of management which makes it different from others based on a variety of factors which include the organisation structure, planning process, quality of control, human relations etc. The success of the project depends upon timely completion of the project, within the framework of allocated budget and it must perform up to the desired satisfaction. An ideal project is one which is carefully selected and prepared, thoroughly appraised/analysed, closely supervised and consistently evaluated. Project identification is the first stone to be laid down in setting up an enterprise. It is not possible for anyone to come up with an idea and at the very first time, convert it into a business opportunity and start a business on that basis. A project, in very simple words, is a plan or idea intended to be carried out. The success or failure of an enterprise depends on its identification of the project. A project is an economic activity with well defined objectives and having a specific beginning and an end. It can be defined as a scientifically evolved work plan devised to achieve a specific objective within a stipulated time. There are various types of projects, some are profitable and some are non-profitable projects. Every project has a life span which may be divided into various broad phases. These phases are Conception Phase, Definition Phase, Planning and Organising Phase, Implementation Phase and Project Clean-up/Termination Phase.

Project management is the planning, consistent monitoring and control of all aspects of the project to achieve the organizational objective within a definite time span and to the specified cost, quality and performance. Project Management is the art of managing all the aspects of a

project from start to finish using a scientific and structured methodology. It is the application of knowledge, skills, tools, and techniques to all activities of the project to meet the project requirements. The success of a project means that the project must be completed within budget, within allocated time and must perform to satisfaction. An ideal project is one which is carefully selected and prepared, thoroughly appraised/analysed, closely supervised and systematically evaluated. Project Management deals with project identification, formulation and appraisal. These three aspects formulate the foundation for the success of projects. To make the project successful it must be managed by a competent project manager. He takes the responsibility for planning, implementing, and completing the project. The project manager strives to maintain the progress and productive interaction with various parties in such a way that overall risk of failure is reduced. I have also discussed the role and responsibilities of the project manager. Managing projects requires application of knowledge, skills, tools and techniques to project activities to meet the project objectives. The project manager does this by performing some tasks at various stages of the project.

3.14 Glossary

- **Project life cycle:** It includes the steps required for project managers to successfully manage a project from start to finish. There are five phases to the project life cycle. Each of these project phases represents a group of interrelated processes that must take place for a successful project.
- **Project management:** It is the application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria within agreed parameters.
- **Project manager:** It is a professional who organises, plans, and executes projects while working within restraints like budgets and schedules. Project managers oversee leading teams, defining goals, communicating with stakeholders, and seeing a project through to its closure.

3.15 Answers to Self-Check Exercise

1. For answer, refer to section 3.0 or 3.2.
2. For answer, refer to section 3.3.
3. For answer, refer to section 3.4.
4. For answer, refer to section 3.5.
5. For answer, refer to section 3.6.
6. For answer, refer to section 3.9.

7. For answer, refer to section 3.11.

3.16 Terminal Questions

- What do you understand by project? Discuss the meaning and characteristics of project.
- What are the various types of projects? Discuss
- Discuss the concept of product life cycle and its stages too.
- What do you mean by project management? What are their roles and responsibilities? Discuss
- What is the significance of project management? Describe

3.17 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
- Gupta, CB and P Srinivasan, Entrepreneurship Development, Sultan Chand and Sons, New Delhi
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- Pitale, R.L. Project Appraisal Techniques, Oxford and IBH.

Lesson 4

Identification and Appraisal of Project

Structure

4.0 Introduction

Project identification is the first step in setting up an enterprise. Identification of a suitable project is very crucial decision as the ultimate success of an entrepreneur depends upon the right selection of the right project. Project identification is concerned with the collection of data, compilation and analysis of economic data for the eventual purpose of locating possible opportunities for investment and development. So, project identification is finding out business opportunities which are feasible and promising.

Albert Einstein "Everything that can be counted does not necessarily count, everything that counts cannot necessarily be counted"

Thomas J. Watson "Opportunity never knocks on the door. You have to knock on opportunity's door and they are all around"

Peter F. Drucker "opportunities are of three types: additive, complementary and break-through".

4.1 Learning Objectives

After studying this lesson, students should be able to understand the:

- Concept, meaning and sources of project.
- Stages, dimensions, need and process of project identification.
- Problems faced by entrepreneur in project identification.
- Concept, meaning, key steps, types, future of project appraisal.
- Techniques for measuring risk and uncertainity

4.2 Sources of Project Ideas

As Prasanna Chandra stated in his book "Projects- Planning, Analysis, Selection, Financing, Implementation, and Review" are the keys to success. So a wide variety of sources should be tapped to identify them. Identifying a new project is not an easy job because the success of a project depends upon the idea of a project. There are different sources and methods which help to develop a wide range of ideas such as performance of existing industries, price trends, availability of raw material and skilled labour , government policies and guidelines, new technological developments, trade fairs, unfilled psychological needs etc.

- **Study the performance of existing industries:** A study of existing industries provides information about the opportunities available in that field. An analysis of the profitability and break-even point of different industries will offer sufficient information about the financial position of different industrial sector. So entrepreneur can easily find out the capacity utilization and profitability and future demand of those industries.

- **Export/Import agencies:** Export /Import agencies" statistical data also provide information about the trends of export/Import of various goods. Five to seven years study of data is helpful in drawing a conclusion. If study shows higher proportion of import of a particular product and shows increasing trend of that product then it means import substitution can be produced. If study shows increasing trend in an export of product then it indicates high export potential for that product.
- **Availability of Raw material and skilled labour:** Availability of raw material and skilled labour at competitive prices required for various industries may throw up project ideas.
- **Government policies and rules regulations:** In any country government plays a very important role. Government plans of expenditure in different sectors provide useful information about possible investment opportunities. The department of industrial development and government of India, publishes guidelines on industries which is an important source of information to identify the scope for new investments.
- **Study of economic, social and price trends:** A study of the price, economic and social trends of the economy is also very helpful in projecting the demand for various goods and services. Greater the demand of the product, greater is the scope of its expansion.
- **Trade fairs**: for the purpose of knowing about new products and developments, National and International trade fairs are the important source for the entrepreneurs to identify latest projects.
- **New Technological developments**: The main cause of commercial exploitation is setting up research laboratories that are engaged in identifying new products or processes which in turn provide avenues for doing so.
- **Possibility of revival of sick units:** There are number of industrial units in India which has been recognized as sick industrial units. If internal factors involved behind the sickness/ weakness of industrial units and that unit still have the capacity to become a financially sound then a capable entrepreneur can take over that sick unit, survive it and convert into financially sound unit with their entrepreneurial skills.
- **Draw clues from consumption abroad:** entrepreneur may identify the project which are new to domestic market but extensively used abroad, if he is ready to take

higher risk. Entertainment parks, fast food restaurants, big malls are few examples coming under this category.

- **Identified unfilled psychological needs:** For some of well established branded products, there may be unsatisfied psychological needs. New products of a branded group being introduced and accepted by consumers show that unfilled psychological needs to the customers.
- **Various government and non-government sources:** Various publications of Government, research organization, consultancy organizations, banks, export import promotion councils, and international agencies contain data which may indicate prospective ventures. An analysis of balance sheet and working results of existed companies will be useful in knowing the industrial sectors that are performing well.

4.3 Stages of project identification

Project identification involve following stages, such as:

Stage-1-Environmental scanning: The environmental scanning covers both scanning of external environment as well as internal environment. The scanning of external environment includes identification of the opportunities and threats to the organizations whereas internal environment include the study of strengths and weaknesses of the organizations. So environment is an aggregate of all conditions whether external or internal that surrounds and affects business. While scanning of business environment, an entrepreneur should take into consideration the different types of environment such as Economic environment, Technological environment, Competitive environment, Socio-demographic environment and Governmental environment.

Stage-2-Generation of ideas: It is primarily concerned with the germination of project idea. Entrepreneur may develop few ideas which he/she may think, suit to the existing environment. The project idea may be discovered from both internal and external resources.

Stage-3-SWOT Analysis: SWOT Analysis means Strengths, Weaknesses, Opportunities, and Threats. It is a method which enables the organization to identify opportunities that can be profitably exploited by it. SWOT analysis helps the entrepreneur in stimulating the flow of ideas.

Stage-4-Preliminary evaluation: An entrepreneur may have many project ideas. So some sort of preliminary evaluation is required to eliminate those project ideas which are not feasible:

- The project idea should confirm to the government regulatory framework. It should be compatible with the national goals, priorities and policies of the government.

- There must be a sizeable market available to consume the product made from the new project.
- The idea must be compatible with the interest, personality and resources of the entrepreneur. In simple words it should be compatible with men, money, material and market at the disposal of entrepreneur. In the words of Murphy "A real opportunity has three characteristics: (a) It fits the personality of the entrepreneur-it squares with his abilities, training, and proclivities, (b) It is accessible to him and (c) It offers him the prospect of rapid growth and high return on invested capital".
- The material needed for the project must be easily and economically available. Because success of the project depends upon availability of resources.
- Cost factor should be taken into consideration. The entrepreneur must be in a position to realize an acceptable profit level.
- Indian economy from the view point of entrepreneur is still underdeveloped. It can absorb a lot more entrepreneurs. So entering an already stagnant market will not be a very good idea. So entrepreneur must analyze the risk factor before entering into a market.
- Inherent risk in the project such as changes in demand, technological changes, variation in business cycle, entry of substitutes, and competition from imports should be properly examined before starting a project.

Stage-5-Corporate appraisal: After preliminary evaluation, corporate appraisal of project should be conducted in order to make sure the availability of raw material, equipment, selling and distribution costs and customer behavior in relation to that project. The important aspect to be considered in this respect are as follows:

- **Raw material availability:** The entrepreneur should ensure the availability of raw material. For this he should investigate the sources of raw material, various suppliers of raw material, inviting price quotation from suppliers, credit period allowed by suppliers and terms and conditions of supply of raw materials.
- **Production, operations and equipment availability:** Before implementing the project, the entrepreneur should investigate the availability of plant and equipment which is required for the production of that product. To achieve this he must study the comparative features of various manufacturers in terms of price, Guarantees and Warranties after sale service, Technical and skilled staff requirement, operative

capacity, location and layout, cost structure, repair and maintenance of equipment and condition of plant and machinery.

- **Marketing and Research and Development:** In this segment the entrepreneur has to study the market share, product line, distribution network, marketing and distribution cost, advertising and publicity programme for the product, market practices such as credit policy, product positioning, laboratories and testing facilities available, co-ordination between research and operations.
- **Financial and Human resources:** They include financial leverage, cost of capital, cash flows and liquidity, tax situation, corporate stage, competence and loyalty of employees, state of industrial relations and relation with shareholders and creditors.
- **Consumer and Consumer behaviour:** The entrepreneur should analyze the categories of consumers such as industrial, foreign and retailer, comparative qualities of own product with competitive products, purchasing power of consumer, consumption pattern, consumer priorities and identification of customers" needs.

Stage-6-Profit potential and prioritize project list: Before entering a new venture a person must look into the profit potential of that project and compare it with the other identified projects. So in this step he needs to prioritize the list of projects, taking some things kept into mind such as:

- Competition among existing firms
- Bargaining power of buyers and suppliers
- Existence of substitute products
- Threat of new entrants
- Divisional key performance indicators
- Time and ease to complete each projects
- Resources required for each project and
- Five year corporate plans and goals

Stage-7-Project selection: After studying profit potential of each project and preparing prioritization list, entrepreneur will come to know the overall rating of the different project ideas. The project with maximum rating will be the most feasible in comparison to other projects. The process involved in selecting a project out of some prospects is also described as "Zeroing in process". While selecting a project, the entrepreneur should keep in mind about the Location, Technology, Size of investment, Equipment, and Marketing of project.

Stage-8-Project objectives: project objective starts where project identification ends. Objectives are the foundations on which the project design is built. Project objectives are concerned with defining in a precise manner what the project is expected to achieve and to provide a measure of performance for the project. The essential requirements of project objectives are:

- It should be simple.
- It should be realistic and attainable.
- It should be specific.
- It should be consistent with available resources.
- It should be consistent with organizational plan, policies and procedures.
- It should be measurable, tangible and verifiable.

So above are the various stages/steps in project identification which can surely help an entrepreneur in identifying and selecting a right project suitable to his/her capabilities and shills, resources and market needs.

4.4 Dimensions of project

Project identification cannot be complete without identifying its characteristics. Every project has three basic dimensions: (a) inputs (b) outputs (c) social costs and benefits.

a. Inputs: This characteristic of a project define what the project will consume in terms of raw material, energy, manpower, finance and organizational set up.

b. Outputs: This characteristic of project define what the project will generate in the form of goods and services, employment, revenue etc.

c. Social costs and benefits: Every project has an impact on the society. So it is essential to evaluate carefully the sacrifice which the society will be required to make and the benefits that will accrue to the society from a given project.

The inputs to set up a project can come from different sources such as governmental agencies, credit and financial institutions and non-governmental organizations such as chambers of commerce and industry, inter-institutional groups, technical consultancy organizations and international collaborations.

4.5 Need of project identification

Project identification is very important. We needed project identification due to following reasons:

- Identified projects become the accelerator agents of economic development.
- These initiate the development of basic infrastructure and environment.

- They have long term beneficial consequences.
- Projects provide guidelines for future pattern of activities and services to be undertaken by an enterprise.
- In the course of time, identified projects bring necessary changes in the society.
- Project commitments are normally not revised.
- Projects also lead to socio-cultural development of the people.

4.6 Process of project Identification

Project Identification involves the assessment and evaluation of a number of characteristics of project such as input, output, social cost and benefits, location and consultancy services etc. Now we will discuss these one by one:

- **Inputs:** In the process of identification of suitable project, first of all SWOT analysis are to be done in respect of the resources available at the disposal of entrepreneur. The various input resources refer to raw materials, energy, manpower, finance and organizational structure.
- **Outputs:** The study of output characteristics helps in determining as to what the project will generate in the form of goods and services, employment, revenues etc. The quantity and quality of all these outputs should be clearly analysed before the proposed project is undertaken.
- **Social costs and benefits:** Every project has an impact on the society. So it is essential to evaluate carefully the sacrifice which the society will be required to make and the benefits that will accrue to the society if the proposed projects are undertaken.
- **Location:** It is also essential to take into account the tentative choice of the location where the project proposed to be set up. In case of medium and large scale projects, the location is normally decided on the basis of project requirements. The selection of the project should be made in the basis of promoter's background and inclination.
- **Counselling services:** For selecting a suitable project, different sources like government agencies i.e. Entrepreneurship development centers, Small industries service institute, Technical consultancy organizations. Credit and financial institutions, Non government agencies i.e. Chamber of Commerce and industry, Inter-institutional groups, Technical consultancy organizations and International collaborations are providing very useful counselling services to the entrepreneurs.

4.7 Problems faced by entrepreneur in Project Identification

While identifying the project, an entrepreneur has faced many problems. These can be classifying into two categories as internal and external problems.

a) Internal problems: Internal problems arise due to the restrictions or management system which will ultimately be responsible for the implementation of a project. These are as follows:

- **Trusting on outside consultants:** In order to prepare feasibility report in the formulation of their projects, an entrepreneur has to trust outside consultants. Inability in the form of preparing feasibility report is a major problem in the early implementation of project.
- **Project goals and objectives**: Generally objectives of the project are decided by top management personnel and management team is not much involved with the determination of project objectives. So this is another major problem for the project team to achieve the unrealistic objective which is formulated by the top management.
- **Cost constraints:** Every entrepreneur cannot develop project management systems, organization structure, network analysis and other elements within the budgeted cost and time schedule for early implementation of project.
- **Resources constraints:** Availability of resources that is both physical and non-physical resources is the major problems for the entrepreneurs when the project is in progress. Physical resources include finance, manpower, facilities and inventories and the non-physical resources include patents, secret processes, unique experience and skills.

ii) External problems: External problems include project environment comprising things, people and situation outside a project. It also include the size, nature, location, extent of the project constitute the environment of the project, government policies and the state of capital market.

- **Non-compliance to the socio-economic objectives**: Factors like size, nature, location and the extent of the project shall create a problem for the entrepreneurs when the project does not comply with the socio-economic objectives of the economy.
- **Troublesome procedure of finance:** Financial institution and banks are the major important external source to the entrepreneurs for financing their projects. Complicated procedures and documentation system of financial institutions and banks make delay in getting financial sanctioning for their projects. Scarcity of funds is the main problem for the entrepreneurs while implementing the projects timely.

- **Government policies and regulations:** While implementing the projects, government policies and rules-regulations are another major hurdle for the entrepreneurs. Delay is taking place in getting approval for licence, foreign collaboration, Control of Capital Issues clearance, environmental clearance, foreign exchange permit, capital goods approval and import goods clearance.

4.8 Project Appraisal

When an organization wants to find a solution to a particular business problem and identify the best way for implementing that solution, it needs to plan and develop a project that might provide an effective action plan for addressing the problem through implementing the solution. This organization will need to give an appraisal of the potential project to make sure the project is really effective because it supports the right solution and solves the required problem. In this context, project appraisal management serves as the major process of analyzing and approving the project.

Project Appraisal is a consistent process of reviewing a given project and evaluating its content to approve or reject that project by analyzing the problem or need to be addressed by the project, generating solution options (alternatives) for solving the problem, selecting the most feasible option, conducting a feasibility analysis of that option, creating the solution statement, and identifying all people and organizations involved with or affected by the project and its expected results. It is an attempt to justify the project through analysis, which is a way to determine the feasibility and cost-effectiveness of the project.

Appraising a project means evaluating the proposed solution for its ability to solve the identified problem or need. Some PM methodologies and guides (e.g., PMBOK) consider technical and financial project appraisal to be part of the initiation or pre-planning phase. PRINCE2 suggests developing the Business Case, which is a form of project formulation and appraisal. Method 123 (MPMM, based on the PMI and PRINCE2 standards) also uses the business case to prepare a proposed project for feasibility analysis and evaluation.

Project Appraisal Management is an essential stage of any project, regardless of its nature, type and size. This stage represents the first point of the pre-planning or initiation phase. Without a project assessment, it is financially and technically unreasonable to proceed with further planning and development. Whether you are buying a new car (e.g. my neighbor's project), constructing a building, improving a business process, upgrading a network system, conducting a marketing campaign, building a garage, or any other initiative, you should conduct a preliminary assessment and evaluation of your endeavor to ensure that you are making a desired and necessary change in your environment.

4.9 Key Steps in Project Appraisal

Different Project Management methodologies use different approaches and techniques to develop a project appraisal. The following steps has been used:

Step-1-Concept Analysis: The first step requires you (as a project appraiser or analyst) to perform a series of analyses to determine the concept of the future project and to present the Decision Package to senior management (project sponsors) for approval. This means that you need to perform the problem-solution analysis that determines the problem/need to be addressed and the solution to be used to address the problem. The solution should be analysed for cost-effectiveness and feasibility (various project appraisal methods and techniques can be used). You also need to identify stakeholders (the people and organizations involved in or affected by the problem and/or solution) and analyze their needs (how they relate to the problem and/or solution). Finally, you will need to develop a decision package that includes the problem statement, solution proposal, stakeholder list, and funding request. This package is then submitted to the sponsor for approval (or rejection). If the sponsor approves the project concept, you can proceed to the next step.

Step-2-Concept Brief: In this step, you must develop a summary of the project concept to define the goals, objectives, broad scope, duration, and projected costs. All of this data will be used to develop the Concept Brief**.** You need to develop a project statement document that specifies the project mission, goals, objectives, and vision. Then you create a broad scope statement that defines the boundaries, deliverables, and requirements of your effort. Finally, you create a preliminary schedule template that establishes an estimated project duration, and then develop a cost projection document based on cost estimates and calculations.

Step-3-Project Organization: You use the Concept Brief to establish an organizational structure for your project. This structure should be developed and explained in the Project Organization Chart**.** The document covers issues such as the governance structure (roles and responsibilities), team requirements and composition, implementation approach, performance measures, and other information. The idea behind the Project Organizational Chart is to create a visual representation of the roles, responsibilities and their relationships, and which people/organizations are assigned to which roles and tasks within the project.

Step-4-Project Approval: The final stage requires you to review all of the previous steps and compile them into a single document called the Project Appraisal**.** This document summarizes all the estimates and assessments that have been made to justify the project concept and verify that the proposed solution addresses the identified problem. The financial, cost-benefit, and feasibility analyses will serve as project evaluation methods for project approval. The document is to be submitted to the Snooper stakeholders (the customer, the sponsor) for review and approval. If the assessment is approved, the project moves to the next phase, planning.

4.10 Types of Project Appraisal

Project appraisal uses the following two major types:

a) **Results Orientation:** It is carried out at the beginning of a project, before any financial or other material costs are incurred. Results-oriented project appraisal focuses on identifying and predicting risks and their impact on the achievement of the results foreseen in the project plan and contract. This type of appraisal involves identifying risks based on project management processes such as the initiation process, the planning process, the execution process, and the control process. Outcome-oriented project assessment also focuses on comparing actual and projected results and ensuring that they are all aligned with the project's goals and objectives.

b) **Financial Appraisal (cost-benefits analysis):** This type of project evaluation is used to determine whether a request for funding (or an investment made) can be justified by the projected savings or revenues after it is completed. Cost-benefit analysis is a planning tool that helps you determine whether an investment will provide a satisfactory return for your organization. It compares the investment or change with its alternatives according to one or more criteria such as cost, technical factors, services, resource utilization, etc. Cost-benefit analysis considers all the resources invested in a project and compares them to the expected benefits. The benefits of a project are usually measured against the costs that would have been incurred if the project had not been undertaken.

Under this method, projects with a balance of benefits and costs are accepted, those with an excess of costs over benefits are rejected, and those with an excess of benefits over costs are deferred for further consideration. In practice, some organizations use a different approach where projects with projected benefit-cost ratios greater than one are accepted, those with ratios between zero and one are borderline for further consideration, and those below zero are rejected before any further investment in plans or work on plans is made.

4.11 Future of Project Management Appraisal

The future is as under:

- **Integrating big data analytics:** Big data analytics will play an important role in the future of project evaluation. With the ability to quickly process large amounts of data, big data analytics can provide valuable insights that can improve the accuracy of project evaluations. For example, it can help identify patterns and trends that may affect a project's viability, such as market fluctuations, consumer behavior, or technological advances. This can lead to more informed decisions and better project outcomes.

- **Increased Use of Predictive Analytics:** Predictive analytics uses historical data to predict future outcomes, and its use in project assessment is likely to increase. By analyzing past project performance, predictive analytics can help predict a project's success and identify potential risks before they occur. This proactive approach can significantly improve project planning and execution.
- **Focus on Agile Project Appraisal:** As organizations continue to adopt agile methodologies, we can expect to see a shift toward agile project appraisal. This approach emphasizes flexibility, collaboration, and customer satisfaction. Agile project assessment involves continuous evaluation and adaptation throughout the project lifecycle, allowing for rapid response to change and ensuring that the project remains aligned with business objectives.
- **AI-Based Project Appraisal Tools:** Artificial Intelligence (AI) is poised to revolutionize project appraisal with the development of AI-powered tools. These tools can automate various aspects of project appraisal, such as data collection, risk assessment, and financial analysis. This not only increases efficiency, but also reduces the potential for human error.

In conclusion, the future of project assessment looks promising, with technological advances paving the way for more accurate, efficient and proactive assessments. As these trends continue to evolve, organizations that adapt and innovate will be better positioned to make informed project decisions and achieve their strategic goals. Project appraisal might seem daunting, but with the right approach, it can be a powerful tool in your project management arsenal.

4.12 Measuring Risk and Uncertainty in Different Projects

The following methods have been used:

a) Risk Adjusted Discount Rate Method: This method calls for adjusting the discount rate to reflect the degree of the risk and uncertainty of the project. The risk adjusted discount rate is based on the assumption that investors expect a higher rate of return on risky projects as compared to less risky projects. The rate requires determination of:

- **Risk-free rate** is the rate at which the future cash inflows should be discounted. It is the borrowing rate of the investor.

- **Risk premium rate** is the extra return expected by the investor over the normal rate. The adjusted discount rate is a composite discount rate. It takes into account both time and risk factors. In this technique, the discount rate is raised by adding a risk margin in it while calculating the NPV of a project. For example, if the rate of discount is 10% for the project, it may be raised to 11% by adding 1% to take account of risks and uncertainties. The increased discount rate will reduce the discount factor, thereby lowering the NPV. Thus the project would be judged as undesirable. This method is used for ranking of risky projects. But the problem with this method is that there is no 'specified margin' which should be added to the free risk rate.

b) The Certainty Equivalent Method: According to this method, the estimated cash flows are reduced to a conservative level by applying a correction factor termed as certainty equivalent coefficient. The correction factor is the ratio of riskless cash flow to risky cash flow. The certainty equivalent coefficient which reflects the management's attitude towards risk is

Certainty Equivalent Coefficient = Riskless Cash Flow/Risky Cash Flow.

If a project is expected to generate a cash of Rs. 40,000, the project is risky. But the management feels that it will get at least a cash flow of Rs. 24,000. It means that the certainty equivalent coefficient is 0.6.

Under the certainty equivalent method, the net present value is calculated as:

$$\mathrm{NPV} = \sum_{t=1}^{n} \frac{\alpha t A t}{(1+i)t} - 1$$

Where α_t = Certainty Equivalent Coefficient

A_t = Expected Cash Flow for year t

I = Initial outlay on the project

i = Discount rate

c) Sensitivity Analysis: The future is not certain and involves uncertainties and risks. The cost and benefits projected over the lifetime of the project may turn out to be different. This deviation has an important bearing on the selection of a project. If the project can stand the test of changes in the future, affecting costs and benefits, the project will be selected. The technique to find out this strength of the project is covered under the sensitivity analysis of the project. This analysis tries to avoid overestimation or underestimation of the costs and benefits of the project. In sensitive analysis, a range of possible values of uncertain costs and benefits are given to find out whether the projects desirability is sensitive to these different values. In this analysis, we try to find out the critical elements which have a vital bearing on the costs or benefits of the project.

In investment decision, one has to consider as many elements of uncertainty as possible on costs or benefits side and then arrive at critical elements which affect the expected costs or benefits of the project. How many variables should be tested to carry out the sensitivity analysis in order to find out its impact on costs or benefits of the projects. It is a matter of judgement. In sensitivity analysis, one has to consider the changes in the various factors correlated with changes in the other. In order to arrive at the degree of uncertainty, the decision maker has to make alternative calculation of costs or benefits of the project. **When there are several uncertain outcomes, three cost-benefit calculations are made in this analysis:**

- The most pessimistic where all the worst possible outcomes are estimated.
- The most likely where all the middle of the range outcomes are estimated.
- The most optimistic where all the best possible outcomes are estimated.

It explains how sensitive the cash flows are under these three different situations. If the difference is larger between the optimistic and pessimistic cash flows, the more risky is the project. The most likely outcome can give a good guide to how 'borderline' is the project.

d) Probability Method: Another method for dealing with risks and uncertainties is to estimate the probable value for a result. Here one has to see a range of possible cash flows from the most optimistic to the most pessimistic for each pertinent year. Probability means the likelihood of happening of an event. It is the proportion of times an event occurs i.e. its frequency. It is the ratio of favourable number of events to the total number of events. In a particular situation, if all possible outcomes of an event are listed and the probability of occurrence is assigned to each outcome, it is called a probability distribution. For any probability distribution there is an expected value. The expected value is the weighted average of the values associated with the various outcomes, using the probabilities of outcome as weights.

If NPV_1 NPV_2 and NPV_3 are three possible estimates of the net prevent value of a project under uncertainty, and' the probability of each outcome of NPV is P_1 P_2 and P_3 then the expected net present value is

$$\text{NPV} = \sum_{t=1}^{n} \frac{\alpha_t A_t}{(1+i)^t} - I$$

E_v (NPV) = P_1 (NPV_1) + P_2 (NPV_2) + P_3 (NPV_3).

This method is conceptually sound. But it lacks objectivity as it is not possible to find out the probabilities of different outcomes.

4.13 Self-Check Exercise

1. What are the sources of project ideas?
2. Write a short-note on stages of project identification.
3. What are the essential dimensions of project?
4. Describe in short, the need for project identification.
5. What do you mean by project appraisal?
6. What is the future aspect of project management?

4.14 Summary

Project identification is concerned with the collection of data, compilation and analysis of economic data for the eventual purpose of locating possible opportunities for investment and development. So project identification is finding out business opportunities which are feasible and promising. In order to grab the opportunities, first of all, environment is to be analyzed for perceiving the opportunities available and after that proper identification of opportunities, it has to be done in the given environment. The next step is to select the best from the available. A wide variety of sources should be tapped to identify best opportunities. Identifying a new project is not an easy job because the success of a project depends upon the idea of a project. There are different sources and methods which help to develop a wide range of ideas such as performance of existing industries, price trends, availability of raw material and skilled labour, government policies and guidelines, new technological developments, trade fairs, unfilled psychological needs etc. While identifying the project, an entrepreneur faces many problems. These problems may be internal problems like trusting on outside consultants, project goals and objectives, cost constraints, resources constraints etc. and external problems like troublesome procedure of finance, government policies and regulations etc.

4.15 Glossary

- **Project appraisal:** It is a detailed and thorough evaluation process that aims to assess the feasibility, viability, and potential of a proposed project. It involves a comprehensive analysis of various aspects of the project, such as its economic, financial, technical, social, management, and environmental factors.
- **Project idea:** It is a plan that better grows in a fertile soil. An interactive and collaborative academic environment is like a fertile soil to the project idea that provides support and nutrition needed for its growth.

- **Project identification:** It is the first step in project management where a potential project is identified and evaluated based on various factors such as feasibility, market demand, resources availability, and profitability.

4.16 Answers to Self-Check Exercise

1. For answer, refer to section 4.2.
2. For answer, refer to section 4.2.
3. For answer, refer to section 4.2.
4. For answer, refer to section 4.2.
5. For answer, refer to section 4.2.
6. For answer, refer to section 4.2.

4.17 Terminal Questions

- What do you mean by project ideas? Discuss the sources.
- Describe the stages of project identification in detail.
- What are the dimensions of a project? Discuss
- Discuss the need and process of project identification.
- Describe the problems faced by an entrepreneur while identifying a project.
- What do you understand by project appraisal? Discuss the key steps in it.
- Describe the various types of project appraisal.
- Describe the future aspect of project appraisal by taking into consideration the Indian scenario.
- Describe the methods used to measure the project appraisal under certainty, risk and uncertainty.

4.18 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
- Gupta, CB and P Srinivasan, Entrepreneurship Development, Sultan Chand and Sons, New Delhi
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- Pitale, R.L. Project Appraisal Techniques, Oxford and IBH.

Unit III

Market and demand analysis: Sources of information – primary and secondary; Demand forecasting and market planning;

Technical analysis: Materials and inputs; Production technology; Product mix; Plant location and layout; Selection of plant and equipment.

Lesson 1

Market and Demand Analysis

Structure

1.0 Introduction

In the words of Cary Rosen "In schools, getting one right out of one is an A whereas getting two right out of twenty is an F. In business, two for twenty is an A, whereas one for one is probably luck". Project appraisal means a detailed evaluation of the project to determine its economic, technical and financial viabilities. Project appraisal is a generic term that refers to the process of assessing, in a structured way, the case for proceeding with a project or proposal. It is the analysis of costs and benefits of a proposed project with a goal of assuring a rational allocation of limited finance resources amongst alternate investment opportunities with the objective of achieving specific goals.

Project appraisal is therefore, a process whereby the entrepreneur makes an objective and independent assessment of the various aspects of an investment preposition of a project idea for determining its total impact and is liability. It saves the entrepreneur themselves from several problems encountered by them while establishing a new project. It involves careful, critical and cautious look at the project idea and analysing its various components, to formulate an objective project in its totality. It is an analytical management aid.

Project appraisal involves systematic examination of technical, economic, managerial, financial, organizational and legal aspects of a project. It is the process through which opportunities become a project, in which the entrepreneur is willing to invest his time, money and other resources. So, it is the process of transmitting information accumulated through feasibilities studies into a comprehensive form to enable the decision maker undertake a comprehensive appraisal of various projects and embark on a specific project or projects by allocating limited resources. Since risk is involved in all activities associated with the project, project appraisal aims at improving the quality of projects and their long-term profitability, aims at minimizing the risk of lending by rectifying their weaknesses and improving their effectiveness by incorporating into them safeguards missed by the promoters because of their lack of knowledge or information.

In a consumer drive market consumer is the Rex. The exploration of the future market is the first step in establishing the profitability of a future project and to get a clear-cut idea as to market share that is likely to be captured. This is what market and demand analysis does as put in other words. Market and demand analysis is to do with two significant dimensions of market opportunities. In other words, it concentrates on the likely aggregate demand for the product or service and the share of the market the firm is likely to share along with other players. These dimensions are very difficult but very important in project analysis.

1.1 Learning Objectives

After studying this lesson, the students should be able to understand the:

- Meaning, concept, steps in market and demand analysis.
- The information needed by market analysts.
- Aspects of present demand.
- Characterization of the market, demand forecasting and forecasting techniques.

1.2 Market and Demand analysis

Market and demand analysis is the managing the demand- its estimation and determining the extent to which it can be met with satisfaction to consumers and profit to the producers. In simple words whenever a project planning and implementing comes to surface, it begins with two aspects of demand. That is, what is the potential size of the market? And to what extent the project planner can get share in the market?

In simple words market analysis is concerned with one question that is ‘what would be the market share of the project under appraisal’ and demand analysis is concerned with one question that is ‘what would be the aggregate demand of the proposed product or service in future'. The first step in project analysis is to estimate the potential size of the market for the product proposed to be manufactured and get an idea about the market share that is likely to be captured. Demand and supply shall be on the long- term basis.

1.3 Information Needed by Market Analysts

The market analyst requires a wide variety of information and appropriate forecasting method. The kinds of information required are:

- Consumption trend in the past and present consumption level.
- Past and present supply position.
- Production possibilities and constraints.
- Imports and exports.
- Cost structure.
- Structure of competition.
- Elasticity of demand.
- Distribution channels and marketing policies in use
- Consumer Behavior and requirements
- Administrative, technical and legal constraints.

1.4 Aspects of Present Demand

The study of present demand requires the following aspects:

- **Current purchases:** What manufactured goods are being bought now, in what quantities and at what prices, by whom and for what purpose.
- **Not satisfied demand:** It may be that the delivered price is very high or the product is not properly marketed or is not good quality.
- **Marketing facilities:** Whether proper marketing facilities exist and what are their capabilities and limitations.
- **Competition:** The number of other firms involved in the production of that product and prices charged by them.

So, to study the future demand we must study the past trends of the product and relationship between the increase in incomes and the increase in demand for the product.

1.5 Steps in market and demand analysis

Market and demand analysis is very important for the success of the future project, so it is very essential that it should be carried out in an orderly and systematic manner. The various steps that are involved in the analysis of market and demand are as follows:

a) Situational analysis as well as specification of objectives: The project analyst, may be entrepreneur himself, is expected to get relationship between a given product and its market presently available. The work starts with base of an informal talk with customers, competitors, middlemen, dealers and even employees or someone who is directly or indirectly associated with the enterprise or enterprises. The existing company or companies have the past and present which is a rich source of valuable experience. In this regard, the analyst may get good deal of facts relating to customer preferences, purchasing power of customers, and the quantity they buy where they buy, when they buy and even why they buy? Such informal analysis sometimes generates enough data to measure the market and to find out the projected demand and revenues. If such an analysis seems to be reliable and enough and if time and cost considerations are there, sometimes an analyst can decide not to carry on a formal study. However, in most circumstances, a formal study is considered essential. For a formal study to be carried out, objectives must be defined clearly and comprehensively. Objectives will help in generating the information relevant in forecasting the overall market demand and in assessing the projected future share of the market. Objectives are, generally, structured in the form of questions such as:

- Who are the consumers?
- How many consumers are there for that product?
- What do they want
- When do they want it?
- Why do they want it?
- How do they want it?
- Where do they want it?
- What quality is desirable?
- How much can they spend?
- What price is acceptable?

b) Collection of market data: To answer the questions which are listed above, information may be obtained from two sources such as primary as well as secondary sources. Secondary information provides the base and the starting point for market and demand analysis. It indicates what is known and provides ways and hint for gathering information required for further analysis. Sources of collecting data include both internal and external sources. Major sources of information are primary and secondary data:

- **Primary data**: Primary data can be defined as information that is collected first hand, generally, by original research tailor made to answer specific, current research questions. The major advantage of primary data is that the information is specific, relevant and up to date. But data collection from primary sources involves much time and cost.
- **Secondary data**: secondary data is that data the information of which is collected for some other purpose and is thus, readily available. The advantages of primary data are the disadvantages of secondary data. As a rule, no research should be done without a search for secondary information first and secondary data should be used whenever available and appropriate. The important sources of secondary information used for market and demand analysis in India are as follows:

➢ Census of India issued by Govt. of India.
➢ National sample survey reports issued by cabinet secretaries and Govt. of India.
➢ Plan report issued by planning commission.
➢ Annual publication by central statistical organization.
➢ Indian year book by minister of information and broadcasting.
➢ Statistical year book issued by UNO.
➢ Economic survey issued by ministry of finance.
➢ Guidelines to industries by ministry of industrial development.
➢ Annual survey of industries by CSO
➢ Annual report of the development wing under ministry of commerce and industry.
➢ Annual bulletin of statistics of exports and imports by ministry of commerce.
➢ Techno-economic survey by national council of applied economic research.
➢ Industrial potential surveys by IDBI.
➢ The stock exchange directory by BSE
➢ Monthly bulletin of RBI, etc and annual report on currency and finance by RBI.
➢ Commodity reports and other studies of the Indian institute of foreign trade.
➢ Studies of economic division of State Trading Corporation.
➢ Weekly bulletins of industrial licenses, import licenses and export licenses published by Government of India.
➢ Internal management reports.
➢ Consultant’s reports.
➢ Government publications of chamber of commerce and industries, FICCI, Directorate of industries etc.

- International information bureaus.
- Financial papers and magazines.

c) Evaluation of secondary information: while secondary information is available economically and readily; its reliability, accuracy, and relevance for the purpose under consideration must be carefully examined. The market analyst should seek to know:

- Person who collected the information and his objectives
- Period in which information was collected and published
- Size of target population
- Size of sample chosen
- Degree of sampling and non-sampling bias in information collected
- Degree of misrepresentation by respondents
- Accuracy of information edited, tabulated and analysed.
- Proper application of statistical analysis

d) Conduct of market survey: When secondary data are not available, irrelevant or obsolete, the analyst must then turn to primary research. Sometimes secondary information needs to be supplemented with primary information gathered through a market survey, specific to the project being appraised. Market survey may be census or sample survey. In census survey approach, the entire population or the universe is covered. Here the term population or universe is taken as collecting information from each respondent may be an individual or an organization. For example, we took the case of estimating demand and market share for the improved kitchen flour mill. To conduct the survey by census method we will have to cover the entire potential customers say in a state, or a region or all India on one hand and the existing units that are manufacturing the conventional kitchen flour mills, dealers and the other. Instead, sample survey can be resorted all the firms concerned. Each technique has its own merits and limitations. Census method is time consuming, costly. However, the information got is quite adequate and reliable and accurate. On the other hand, sample survey is less expensive and less time consuming. The information sought in a market survey relates to one or more of the following aspects

- Total demand and the growth rate of demand.
- Demand in different segment of the market.
- Income and price elasticity of demand.
- Objectives of buying.
- Buying plan and intentions.
- Satisfaction with the existing products unsatisfied needs.

- Attitudes towards different products.
- Practices and preferences in distribution.

i) Steps in conducting sample survey:

Following are the steps which are involved in conducting sample survey:

- **Define the target population**: Defining of target population is of almost importance in clear and carefully studied manner as it is first step. The target population may be divided into certain segment with their features.
- **Select the sampling technique and size**: Sampling technique implies the type of sampling i.e. simple random sampling, cluster sampling, sequential sampling, stratified sampling, systematic sampling and so on. Another important aspect of sampling is size of it, which has greater and deeper bearing on the reliability and accuracy of estimates.
- **Design the questionnaire**: To collect the information from the respondents, the main instrument is questionnaire. Questionnaire is a sequential array of questions, designed in a way which is ideally suited to elicit information from someone who is administered the questionnaire.
- **Recruitment and training of researchers**: proper plan of recruitment and training is to be prepared and implemented. Great care is needed in recruiting the researchers and imparting the right kind of training to them.
- **Get information according to questionnaire from the target respondents**: the respondents can be interviewed personally, or through mail or telephone. Each means is having its own merits and demerits.
- **Scrutiny of information:** Next step is to scrutinize the gathered information so that irrelevant or inconsistent data can be eliminated.
- **Analysis and interpret the information:** The collected information has no meaning unless, it is minutely analysed and interpreted with due care. The data are to be tabulated as per the plan of analysis followed by strict statistical investigation wherever possible and needed. The analysis should be done by a properly qualified person having a background in Statistics and Economics.

1.6 Characterization of the Market

This step characterizes the market based on information gathered. The market for the product or service can be described in term of clear-cut characteristics based on the information gathered from secondary sources and through the market survey or primary sources. It can be described in term of the following:

- **An Area:** In economics, a market does not mean a particular place but the whole region where sellers and buyers of a product ate spread. Modern modes of communication and transport have made the market area for a product very wide.
- **One Commodity:** In economics, a market is not related to a place but to a particular product. Hence, there are separate markets for various commodities. For example, there are separate markets for clothes, grains, jewellery, etc.
- **Buyers and Sellers:** The presence of buyers and sellers is necessary for the sale and purchase of a product in the market. In the modem age, the presence of buyers and sellers is not necessary in the market because they can do transactions of goods through letters, telephones, business representatives, internet, etc.
- **Free Competition:** There should be free competition among buyers and sellers in the market. This competition is in relation to the price determination of a product among buyers and sellers.
- **One Price:** The price of a product is the same in the market because of free competition among buyers and sellers.

1.7 Demand Forecasting

After collecting information about various aspects of the market and demand an attempt is to be made to estimate market demand for the industry. The first step in market forecasting is to assess the market potential. Market potential is the highest possible level of demand in each environment. Market forecast is the projection of demand for the entire industry and this led to the firm's share and is called the sales forecasting. Thus, estimating sales or predicting the sales gives the base for the quantity and quality of production and base production figure are predicted, estimation can be made for each operation and the timely and sound decision can be taken. Therefore, forecasting means, demand forecast and indirectly the sales forecast.

1.8 Forecasting techniques

The following techniques have been used:

a) According to time duration: Since time duration there are three types of forecasts– short term, medium term, and long term.

- **Short term forecast**: Short term forecast made for a very short period. Generally, it covers a period of one month to twelve months i.e. one year. This type of forecast further divided into quarters or months for precision. The result achieved from this forecast is more accurate.
- **Medium term forecast**: The time horizon for medium-term is between two to four years. It means more than one year to four years. The results achieved from these

forecasts are likely to be less accurate as compared to short term forecasts but more accurate than long term forecasts due to time factor.

- **Long term forecast**: Long term time horizon ranges over or beyond four years. It is a period of more than four years to fifteen years or can be extended more than in exceptional circumstances. The accuracy level of this type of forecast is minimum.

b) According to qualitative methods of demand forecasting: These surveys are conducted to collect information about consumer's intention and their future purchase plan. This method includes:

(i) Survey of potential consumers to elicit information on their intentions and plans.

(ii) Opinion polling of experts that includes opinion survey of market experts and sales representative, and their market studies and experiments.

- **Consumer survey**: This method involves direct interview of the potential consumers. This could be done either by presenting a questionnaire personally before the consumers or by sending the questionnaire by post. In this method we can include direct interview, sample survey, and end use method.
- **Jury of executive opinion method**: In this method, small numbers of top executives are requested to register their individual opinions relating to the probable number of future sales. So, the executive who are selected for giving the opinions are those who are fully aware of the market conditions, capabilities and the boons and bans of the industry. In this method market studies and experiment such as laboratory tests, test market or Delphi methods are to be conducted.

- **According to statistical methods of demand forecasting**: Statistical method is very helpful in demand forecasting. It is used for long-term forecasting of demand. Statistical methods have certain advantages over the other methods such as
  - Estimation is based on the theoretical relationship between the dependent and independent variables.
  - Element of subjectivity is minimum in this estimation.
  - It is a scientific method.
  - It involves minimum cost as compare to other methods.
  - It is relatively more reliable.

The Statistical method of forecasting involves the following techniques:

i) Trend projection method or Time series: Trend projection method is a classical method of demand forecasting. This method is concerned with the study of movements of variables through time. The use of this method requires a long and reliable time-series data. This method is used under the assumption that the factor responsible for the past trends in the variables to be projected for example sales and demand, will continue to play their part in future in the same manner and to the same extent in magnitude and direction. This assumption may be quite justified in many cases. This method is also called Naïve forecasting or the projection of the Present Trend or Mechanical extrapolations or Quantitative method. There are three techniques of trend projection based on time-series data.

- Graphical method
- Fitting trend equation or least square method or Line of best fit.
- Box-Jenkins method

ii) Barometric Methods: This method is also known as Leading (economic) indicator method or Lead Lag method. The Barometric method of forecasting follows the method meteorologist's use in weather forecasting. They use barometer to forecast weather conditions based on movements of mercury in the barometer. The basic approach of barometric technique is to construct index of relevant economic indicator and to forecast future trends based on movements in the index of economic indicators. Use of barometric techniques is based on the idea that the future can be predicted from certain happenings in the present. Indicator used in this method are Leading indicators, coincidental indicators and lagging indicators.

iii) Econometric Methods: This method combines statistical tools with economic theories to estimate economic variables and to forecast economic events together with mathematical model building. The econometric methods are widely used to forecast demand for a product, for a group of products and for the economy as whole. An econometric model may be a

- Regression method
- Simultaneous equation method

1.9 Self-Check Exercise

1. What is project appraisal?
2. What is market and demand analysis?
3. What is market analysis?
4. Write a short-note on analysis of market and demand.
5. Write a short-note on sources of secondary data.
6. How you can conduct a market survey?
7. What do you mean by demand forecasting?

8. Write a short-note on forecasting techniques.

1.10 Summary

Project appraisal involves systematic examination of technical, economic, managerial, financial, organizational and legal aspects of a project. It is the process through which opportunities become a project, in which the entrepreneur is willing to invest his time, money and other resources. So, it is the process of transmitting information accumulated through feasibilities studies into a comprehensive form to enable the decision maker undertake a comprehensive appraisal of various projects and embark on a specific project or projects by allocating limited resources. Since risk is involved in all activities associated with the project, project appraisal aims at improving the quality of projects and their long-term profitability, aims at minimizing the risk of lending by rectifying their weaknesses and improving their effectiveness by incorporating into them safeguards missed by the promoters because of their lack of knowledge or information. Market and demand analysis is to do with two significant dimensions of market opportunities. In other words, it concentrates on the likely aggregate demand for the product or service and the share of the market the firm is likely to share along with other players. These dimensions are very difficult but very important in project analysis.

1.11 Glossary

- **Demand analysis:** It is the research conducted by companies that aim at understanding customer demand for a certain product. Businesses generally use it to determine whether they can successfully enter the market and obtain the expected profit.
- **Demand forecasting:** It provides essential information about future customer demand; it assists companies in making more intelligent decisions about production planning, inventory management, and supply chain operations. It also helps with profit margins, cash flow, capital expenditures, future capacity planning, and more.
- **Market analysis:** It is a detailed assessment of your business's target market and the competitive landscape within a specific industry. This analysis lets you project the success you can expect when you introduce your brand and its products to consumers within the market.
- **Market survey:** It is the survey research and unit of analysis of the market for a particular product/service which includes the investigation into customer inclinations. A study of various customer capabilities such as investment attributes and buying potential.

1.12 Answers to Self-Check Exercise

1. For answer, refer to section 1.0.

2. For answer, refer to section 1.2.
3. For answer, refer to section 1.2.
4. For answer, refer to section 1.5.
5. For answer, refer to section 1.5 (b).
6. For answer, refer to section 1.5 (d).
7. For answer, refer to section 1.7.
8. For answer, refer to section 1.8.

1.13 Terminal Questions

- What do you mean by market and demand analysis? Discuss the steps in market and demand analysis.
- Describe the information needed by analysts to analyse the market.
- What is demand forecasting? Discuss its concept and significance.
- Describe the forecasting techniques used for market and demand analysis.

1.14 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
- Gupta, CB and P Srinivasan, Entrepreneurship Development, Sultan Chand and Sons, New Delhi
- Arya, K. (2016). Entrepreneurship: Creating and Leading an Entrepreneurial Organization. Pearson.
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- Ramachandran, K. (2014). Entrepreneurship Development: Indian cases on Change Agents. Tata McGraw Hill.
- Robinson, P. J. (2017). A Guide for Writing Your Business Plan. Independently published
- Chandra, Prasana: Project Planning Analysis, Financing Implementation and Review. TATA McGraw Hill, New Delhi.
- Patel, Bhavesh M., Project Management, Vikash Publishing House Pvt. Ltd., New Delhi.
- Pitale, R.L. Project Appraisal Techniques, Oxford and IBH.

Lesson 2

Technical Analysis

Structure

2.0 Introduction

Project Appraisal is a process of detailed examination of several aspects to a given project before recommending the same. After market and demand analysis, there is need for further suitability of the project as to whether it is feasible or viable in other dimensions so that the project idea is put to decisive test of cold facts before it is accepted for formulation and implementations. So, there is need for feasibility studies which include Market feasibility, technical feasibility, Economic feasibility, Managerial feasibility and Commercial feasibility. Therefore, feasibility study is the process of investigating a problem and finding a solution in depth to determine its economic viability and worth of development. Project feasibility is a test where prima-facie viability of the investment is evaluated.

2.1 Learning Objectives

After reading this lesson, the students should be able to understand the:

- Concept, and meaning of technical analysis.
- The technical appraisal.

2.2 Concept of Technical Analysis

Technical analysis seeks to determine whether the prerequisites for successful commissioning of the project have been considered and reasonably good choices have been made with respect to location, size etc. it is carried out to measure whether the project is technically sound and viable. Technical analysis of a product is very essential to ensure that necessary physical facilities required for production will be sufficient and the best possible alternative is selected to procure them. A technical analysis should review the techniques to be applied and should incorporate:

- A description of the product, including specification relating to its physical, mechanical and chemical properties, as well as the uses of the product.
- A description of the selected manufacturing process, showing detailed flow charts and presenting alternative processes which may have been considered and the justification for the adoption of the selected process.
- A determination of the plant size and production schedule.
- Selection of machinery and equipment.
- Identification of plants location and as assessment of its desirability in terms of its distance from raw material sources and markets.
- A design of the plant layout and an estimate of the cost of the erection of the proposed buildings and land improvements.
- A study of the availability of raw materials and utilities including a description of physical and chemical properties, quantities needed, current and prospective costs, terms of payment, location of sources of supply, and continuity of supply.
- An estimate of labour requirements, including a detailed break-down of direct and indirect labour requirement, and the supervision required for the manufacture of the product.
- A determination of the type and quantity of waste to be disposed of, together with a description of the waste method, its costs, and the necessary clearance from proper authorizes.
- An estimate of the production cost of the product.

2.3 Technical Appraisal

Technical feasibility assesses the technical viability for coming to a conclusion as to whether it fulfils the expected norms or not. Technical appraisal involves the critical study of the following aspects:

i) Material inputs and utilities: This aspect is concerned with defining the materials and utilities required, specifying their properties in detail, and setting up their supply programme. Material inputs and utilities may be classified into four broad categories such as (a) raw-materials (b) processed industrial materials and components (c) auxiliary materials and factories supplies and (d) utilities.

- **Raw-materials**: It may be full or semi processed. It can be further grouped into (a) agricultural products (b) Mineral products (c) Livestock and forest products (d) Marine products.
- **Processed industrial material and components**: processed industrial materials and components represent important inputs for several industries that includes base metals, semi-processed materials, manufactured parts, components and sub-assemblies. To get authentic and sufficient information, answer of the following questions must be sought: what are their properties-physical-mechanical-chemical and electrical? What are the domestic sources? What are foreign sources subject to limit laid down by authorities? Extent of dependability on supplies and suppliers? What has been the price trend in the past? What will be the future trend?
- **Auxiliary materials and factories supplies**: Any manufacturing project needs variety of auxiliary materials and factory supplies like chemicals, additives, packaging materials, paints, varnishes, oil, grease, cleaning materials, consumable stores in addition the first two categories of materials.
- **Utilities**: Utilities stand for power, water, steam, fuel, gas which play a constructive role in converting raw materials into end products. Correct assessment of these in terms of location, technology, plant capacity and the like are necessary. These utilities turn critical at times and become limiting factor in achieving highest level of efficiency or lowest level of cost.

ii) Manufacturing Process/Technology: The methodology used in converting materials into final products in known as a technology. For manufacturing a product there are alternative technologies. To manufacture steel either open health process or Bessemer process can be used that represents a technology. In making cement the possible process is wet or dry. These technologies always changing from good to better and from better to best. Even, what is today the best can be supposed in case better than the best is made available. Research and development efforts make possible the best because even the very best can be improved upon a period. Feasibility study especially technical is to focus its attention on the significant aspects of choice of technology, acquisition of technology and the appropriateness of the technology.

a) Choice of technology: The choice of technology or technical knowhow is influenced by many variables. Some of these are given below:

- **Plant capacity:** Plant capacity and manufacturing technology are closely related with one another. To meet a given plant capacity requirement only a specific production technology may be viable.

- **Investment outlay and production cost:** The impact of alternative technologies on invest expenditure and production cost should be carefully assessed over a period. As we all know cost and technology are closely related in that the cost and quality is based on the technology and that is based on its cost.
- **Major inputs:** Basic inputs play significant role in choosing a manufacturing technology. For example, in manufacturing of cement the quality of lime stone decides whether the manufacturing unit should go in for 'Wet' or 'Dry' processing.
- **Proof of success:** The technology adopted must well be proven by its success for use by other units. That is, a latest technology may not be always the best. One which is tried, tested, and trusted by successful units in the line is more acceptable.
- **Latest advancement:** The technology adopted is one which is the latest or one which is adaptable for updating easily with least cost and time.
- **The product mix:** Product mix stands for the main products, co-products and by products that are resulting by use of a particular technology.
- **Ease of absorption:** Technology, however, latest and effective, has no meaning unless it is easier to be absorbed by the company. Very often it so happens that high-level technology may not easily percolate to the absorbing firm due to some reason or reasons.

b) Acquiring technology: If technology is available openly, then the detailed information can be obtained even at feasibility stage. In case the knowledge available with the owner, then this step-that is-evaluation of process, can altogether be eliminated. And if the knowledge is not available with the owner, it must be acquired from outside sources such as foreign collaborators, consultancy organizations, machinery suppliers, promoter's knowledge and experience and recruitment of suitable personnel. The acquisition of technology from some other enterprise may be possible through:

- **Technology Licensing:** This is the most popular way of acquiring technology. Under this arrangement, the technology license gives the licensee the right to use the patented technology and get the concerned know how on a mutually agreed basis. The supplier of technology generally provides a technology package which may consist of some components which are not essential. Therefore, it becomes essential to break the package into component parts such as technology proper, engineering services, supply of intermediate products, and supply of equipment by the licensor, use of a trade name, among other things. Every effort should be made to acquire only the essential and matching components of the technology package. The contract for technology licensing should be careful about Definition of technology to be acquired, Cost of technology licensing, Guarantee provided by the licensor, Duration of the technology licensing and Purchase of intermediate products, components and other related inputs.

- **Outright purchase of technology:** This alternative is most appropriate when:
- There is no possibility of significant improvement in technology soon.
- There is hardly any need for technological support from the seller of the technology.

- **Joint venture arrangement:** This is also very popular method under which the supplier of the technology may participate technically as well as financially in the project. Financial participation is normally in the form of equity holding. Experts are of the opinion that financial participation is likely to strengthen the motivation of technology supplier to transfer improvements without hesitation.

c) Appropriateness of Technology: Appropriate technology means for those methods of production or process of production which are most fitting to the local, economic, social, cultural and environmental conditions. Technology should be considered appropriate if it satisfy the following questions:

- Whether the technology uses the local raw materials?
- Whether the technology employs the services of local labour force?
- Whether the goods and services produced cater to the basic needs?
- Whether the technology protects and maintains the ecological balance?
- Whether the technology is in harmony with the social and cultural values of the area?

iii) Product Mix: The choice of product mix is guided by market requirement. Variations in size and quality of products are aimed here at satisfying a broad range of customers. It enables a company to expand its market and enjoy higher profitability. There should be a degree of flexibility in the product mix to response as to changing market conditions and thereby enhancing the power of the firm to survive and grow under different situations. Product mix is so designed as to meet the requirements of target market or segment or segments of the entire market for the companies, products and services. All other mixes namely price, place and promotion mix go in consonance in a congruous way in requirements of a product mix. For example, a ready garment manufacturer of lady’s suits will have a wide range of items of size and quality to suit individual differences in customers both physical and mental. Wide range of sizes, patterns and quality play significant role in enabling to garment maker to earn good profit through higher profitability. Thus, each company comes out with different sizes, different colours, variation in inputs, packing and promotion package. These varieties meet the requirements of poor, middle and rich class. The idea is to arrive at maximum profit.

iv) Plant capacity or production capacity: Plant capacity or Production capacity refers to the number of units that can be manufactured during a given period. According to experts "Plant capacity is defined in two ways namely, feasible normal capacity and normal maximum capacity". The feasible normal capacity stands for the capacity attainable under normal working conditions. This is established based on installed capacity, technical conditions of the plant, normal stoppages, down-time for maintenance and tool changes, holidays and shift patterns. Whereas, normal maximum capacity is the capacity which is technically attainable and this normally corresponds to the installed capacity guaranteed by the supplier of the plant.

v) Manpower requirement: Requirement of manpower of different skills, both for construction stage and operational stage, should be assessed based on phasing of project execution and completion. The requirement of people should be assessed category, operation and function wise. The assistance of Consultancy Company for recruitment of staff with desired skills and qualification may be sought, if needed. The object should be to ensure the availability of adequate manpower for future operation and to avoid over staffing at any stage of project execution. Adequate provision for fund for the training of key personnel with a time bound programme should be estimated beforehand. The introduction of scheme of productivity- linked incentive/bonus may be kept in mind.

vi) Plant location and site: Location refers to a broad area like city, an industrial zone, or a coastal zone and site refer to a specific piece of land where project would be set up. Plant location includes selection of a requisite region, credible community and suitable site. Selection of region is a broad decision. For selection of proper site, a survey may be conducted, and both monetary and non-monetary factors should be investigated. The choice of location influenced by a variety of considerations such as raw material supplies, proximity of supplies, communication and transport facilities, manpower, labour laws and government policy taxes and fees, etc.

After selecting of region, next step is to selection of a particular community or locality. The selection of a community or locality calls for rigorous factor like quality and quantity of labour force, banking and credit facilities, local taxes, rents, rates, and insurance charges, political stability, extent of state assistance and many more.

The final round selection is selection of site or space where industrial plant is going to be located. The important factors that decide the choice of suitable site are price of land, the type of choice, ease of waste disposal, people's attitude, existence of religious and social institutions, etc. Taking all these factors, the most advantageous location is that at which the cost of gathering material and fabricating it plus the cost of distributing the finished product to the consumer is the least.

vii) Machinery and equipment: It is the technology that determines the exact requirement of machineries and plant capacity. It is also influenced by the type of project. For a process, industrial plants, say Petro chemical unit or pharmaceutical unit, the machineries and equipment required should be such that the various stages of manufacture are matched well. To determine the kind of machinery and equipment required for a manufacturing industrial plant, the following procedure is generally followed:

- Estimate the likely levels of production over given period.
- Define various machines and operations
- Calculate machine hours required for each type of operation
- Select machineries and equipment required for each function.

The equipment required for the project may be classified into the following types:

- Mechanical equipment,
- Plant or process equipment,
- Electrical equipment,
- Instruments,
- Controls,
- Internal transportation system, and
- Earthmoving and construction equipment and others.

While selecting machines and equipment some possible constraints should be kept in mind like-shortfall of electricity, lack of cooperation on the part of employees when they are meant to advanced technological or numerical control of machines, hurdles in moving equipment or divided plant to remote places.

viii) Structure and civil work: For the proper execution of civil work in the proposed project, the essential steps are:

- Defining scope of work with respect to site preparation, construction of roads and buildings in factory and residential areas and construction of sewerage line and other civil works
- Preparing cost estimates
- Selecting agencies to be hired for construction Preparing plans, charts and drawings.
- Civil work can be further divided:

a) Site preparation and Development: This involve a set of activities namely, grading and levelling of site, demolition and removal of the existing unwanted structures, relocation of existing pipelines, cables roads power-lines, reclamation of swamps and draining and removal of stagnant water, connection of the utilities from the site to the public net-work, electric power—both high-tension and low-tension, water for drinking and various industrial purposes, communications-telephone, telex, roadways, railways and other activities of site preparation and development.

b) Buildings and Structures: It includes factory or process buildings, ancillary buildings required for stores, warehouses, laboratories, utility supply centers, maintenance services and others, administrative buildings, staff welfare buildings, cafeteria, medical centre, gymkhana facilities, recreation buildings and residential buildings.

c) Outdoor works: The outdoor works involves

- Supplies and distribution of utilities such as water, electricity, steam, gas, communication and the like
- Handing and treatment of emission, wastage and effluents
- Transportation and traffic arrangements such as roads, rail tracks, paths, parking areas, sheds, garages, traffic signals and so on
- Outdoor lighting
- Landscaping and
- Enclosures and supervision that include boundary wall, fencing barriers, gates doors, security posts, sewerage openings and the like.

ix) Project charts and layouts: When data collected on major dimension of project that is on market size, plant capacity, production technology, machines and equipment, building and civil works, then project charts and layouts are prepared. These charts and layout define the scope of the project and provide the basis for detailed project engineering and estimation of investment and production costs. General functional layout, transport, utility consumption, communication, organization, plant material flow and production line diagram are the major charts and layouts.

- **General functional layout:** It shows the general relationship between equipment, building and civil work.
- **Utility consumption diagram:** It shows the principal consumption points of utilities and their required qualities and quantise.
- **Transport layouts:** It shows the distances and means of transport outside the production line.

- **Communication layouts:** It shows how the various parts of the project will relate to telephone, telex, intercom, and fax etc.

x) **Plant layouts:** It shows the physical layout of the factory, equipment dimensions, provision for material handling, level of computerization, nature of process etc. due consideration should be given while preparing a plant layouts to the followings such as Consistency with production technology; Effective use of space; Flexibility to take care future changes; Smooth flow of goods from one work station to another or one stage to another; Safety to the work force; Minimization of costs; and Provision for better working conditions to enhance efficiency.

- **Material flow diagram:** It shows the flow of materials, utilities intermediate products, final products, by-products and emissions.
- **Production line diagrams:** It shows how the production would progress along with the key information for main equipment.
- **Organizational layouts:** It shows the organizational set up of the project along with information on personnel required for various departments and their inter-relationship even reaching grass-root level of each work position.

xi) **Work schedule:** Work schedule is the plan of the work relating to installation and initial operation. The purpose of the work schedule is to:

- Anticipate problems likely to arise during the installation phase and suggest possible means for coping with them.
- Establish the phasing of investments taking into account the availability of finances.
- Develop a plan of operations covering the initial period

So, to avoid the possible losses arising out of idle-plant capacity or idle capacity and the determination of stock of material, work schedule should be drawn in detail with clarity and ground realities. This help in making use of available inputs by adjusting plant capacity utilization or at least commissioning to start with.

2.4 Self-Check Exercise

1. What do you mean by technical analysis?
2. What do you understand by manufacturing process?
3. What is technology licensing?
4. What do you mean by product mix?
5. What is the meaning of plant location and site?
6. Write a short-note on plant layouts.

2.5 Summary

Project appraisal is the assessment of project in terms of economic, social, commercial, ecological and financial viability. Technical feasibility assesses the technical viability for coming to a conclusion as to whether it fulfils the expected norms or not. Technical analysis seeks to determine whether the prerequisites for successful commissioning of the project have been considered and reasonably good choices have been made with respect to location, size etc. It is carried out to measure whether the project is technically sound and viable. Technical analysis of a project is very essential to ensure that necessary physical facilities required for production will be sufficient and the best possible alternative is selected to procure them. So, technical appraisal plays a very crucial role in acceptance or rejection of a project because a project which is not technical viable will not be financed by the lending institution.

2.6 Glossary

- **Product mix:** It is also known as product assortment or product portfolio, refers to the complete set of products and/or services offered by a firm. A product mix consists of product lines, which are associated items that consumers tend to use together or think of as similar products or services.
- **Technical analysis:** It is a means of examining and predicting price movements in the financial markets, by using historical price charts and market statistics. It is based on the idea that if a trader can identify previous market patterns, they can form a fairly accurate prediction of future price trajectories.

2.7 Answers to Self-Check Exercise

1. For answer, refer to section 2.2.
2. For answer, refer to section 2.3 (ii).
3. For answer, refer to section 2.3 (ii) (b).
4. For answer, refer to section 2.3 (iii).
5. For answer, refer to section 2.3 (vi).
6. For answer, refer to section 2.3 (x).

2.8 Terminal Questions

- What do you mean by technical analysis? Discuss its importance and significance.
- What is the meaning of technical appraisal? Discuss the different aspects comes under it.

2.9 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)

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- Chandra, Prasana: Project Planning Analysis, Financing Implementation and Review. TATA McGraw Hill, New Delhi.
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Unit IV

Financial analysis: Cost of project and means of financing; Major cost components; Planning capital structure; Financing schemes of financial institutions.

Lesson 1

Financial Analysis

Structure

1.0 Introduction

In the present scenario the efficient allocation of capital resources is a most important function of project management. This function involves firm's decision to invest its funds in long-term assets like plant, machinery land, building, equipments etc. These assets are extremely important to the firm because the organizational profits are derived from the use of its capital investment in assets which represent a long-term commitment of funds. The future development of an enterprise depends on the capital investment projects. These projects may be the replacement of existing capital assets which turns out to be less attractive to the firm or expansion of business for implementing new ideas and planning. Thus, long term investment decisions of an enterprise fall within the definition of project budgeting or capital expenditure decisions. These decisions are concerned with the acquisition of assets in which funds will be invested by an enterprise. The assets of business include long term assets and short-term assets. Long term assets will yield a return over a period whereas short term assets are those assets which are easily convertible into cash within one accounting period, normally a year. The long-term investment decision is known as project budgeting/capital budgeting and the short-term investment decision are identified as working capital management.

1.1 Learning Objectives

After studying this lesson, students should be able to understand the:

- Concept, meaning, definitions, features, importance, need of capital budgeting.
- Essentials of various decisions and forecasts.
- Types of capital expenditure.
- Factors affecting capital investment decisions.
- Techniques of capital budgeting.

1.2 Meaning of Project Budgeting

'Capital Budgeting' consists of two important terms, Capital and Budgeting. The concept of capital budgeting gets much clarified if these terms are properly understood**.** ***Capital*** refers to the total resources, other than human, which a business enterprise procures and utilises for productive or profit-earning purposes. Capital is relatively scarce and has many uses to which it can be put. Here, in fact, capital indicates capital expenditure or investments in fixed assets. Fixed assets are acquired to give service over several years. 'Fixed assets are those that will provide service over a period. They are a deferred expense and determine the production capacity of a firm. A cash outlay is made at one point of time but the benefits accrue over a period.

Budgeting means the planning made before the actual expenditure is incurred. It prepares the blue print both in quantity and monetary terms and reflects the objectives of the firm. It involves collection of relevant data, analysis of the information available, preparation of various alternative plans and selection of the most profitable one.

Thus, the term ***Project Budgeting*** refers to long term planning for proposed capital expenditure and their financing. It includes both raising of long-term funds as well as their utilization. It is defined as a firm's formal process of investment in capital assets. Project budgeting is the decision-making process by which a firm evaluates the acquisition of its major long term/fixed assets. It involves an enterprise's decision to invest its current resources for addition, disposition, modification and replacement of fixed assets.

Project budgeting is a multifaceted activity. It contains searching for new and more profitable project proposals, investigating, engineering and marketing conditions to predict the consequences of accepting the project and making economic analysis to determine the profit potential of project proposal. Thus, Project Budgeting consists in planning the deployment of available capital for the purpose of maximising the long-term profitability of an enterprise.

1.3 Definitions

Some definitions of capital budgeting as given by certain eminent thinkers are reproduced below:

- Capital budgeting is long term planning for making and financing proposed capital outlays. It is concerned with allocation of the firm's scarce financial resources among the available market opportunities. The consideration of investment opportunities involves the comparison of the expected future streams of earnings from a project with immediate and subsequent streams of expenditure for it. – **Horngren**
- Capital budgeting consists of in planning development of available capital for the purpose of maximizing the long-term profitability of the concern. – **R.M. Lynch**
- Capital budgeting involves a current investment in which the benefits are expected to be received beyond one year in the future. – **James Cavan Horne**
- The capital budgeting decision, therefore, involves a current outlay or series of outlays of cash resources in return for an anticipated flow of future benefits. – **G.D. Quirin**
- Capital budgeting refers to the total process of generating, evaluation, selecting and following up on 4 capital expenditure alternatives. – **Lawrence Gidman**

1.4 Features of Capital Budgeting

Capital budgeting is said to be "budgeting with a difference "since it deals with unique problems-problems of capital investment. The other budgets do not have such a long range of futuristic view. They do not involve such huge investments of capital and they do not involve such an extent of risk as capital budgeting involves. Capital budgeting, thus, has certain basic feature or salient characteristics of its own. These are enumerated below:

- Capital budgeting entails heavy investment of funds. It may run into lakhs and crores of rupees.
- The effect of capital budgeting decisions-judicious or faulty goes to many years after the year of expenditure. A capital budget, thus, looks too much longer-range future than other budgets do.
- There is greater uncertainty of the results. No doubt, every decision has an element of uncertainty but the element of uncertainty is much more potent here, since capital budgeting concerns distant future.

- There is the anticipation of large benefits spread over quite a long period. Investment in fixed assets widens the base of activity and increases the profit-earning capacity of the concern.
- Since a huge outlay is involved and outcome is shrouded in a high degree of uncertainty, the decisions of capital investments are taken over at the executive level i e. at a higher level of management. It requires all the business expertise, keen sense of judgment and analytical mind to arrive at judicious decisions about capital expenditure.

1.5 Importance and Need of Capital Budgeting

The importance, near indispensability and necessity of having a systematic budgeting for capital expenditure is on account of the following factors:

- **Huge Investment of Funds':** Capital expenditure involves heavy investment. Acquisition of Land, construction of factory and administrative building, purchase of plant and machinery, office equipment, furniture & fixtures and other assets take away a major portion of the monetary resources mobilized by the business both externally and internally. A judiciously planned expenditure is thus imperative.
- **Reversal Causes Huge Losses:** Before arriving at a decision on capital expenditure, all the pros and cons of such a step must be carefully analysed. Any hasty purchase of a fixed asset may bring about sizable loss if that asset is resold in the market. There may be no demand for, say, a second-hand plant or factory building. Moreover, the cost of installation and later dismantling of the machines will be unrealizable. Capital budgeting, thus, becomes significant since budgeting always implies well thought out and properly planned course of action.
- **Factor of Obsolescence:** While deciding to acquire a fixed asset, the likely time of it becoming obsolete must be taken into account. Technology is making rapid advances and more economical, speedier, less energy consuming and technically superior models are coming up- soon. An asset may otherwise be serviceable for another span of time, but continued use of the same in the face of latest and advanced equipment used by the competitors may put the business to a disadvantageous position. Moreover, the possibility of the products becoming out style or out of fashion cannot be ruled out. Capital assets installed to manufacture such products obviously become obsolete, unless and until these very assets have multiplicity of uses.

- **Loss of Flexibility:** Capital expenditure not only entails heavy investment but also makes the concern inflexible in its activities or at least less flexible than otherwise. Once the funds are committed to long term assets a particular line of products or a particular production technique must be adopted. A change will be very difficult to make. So, advance planning is indispensable.

1.6 Essentials for Various Decisions and Forecasts

The necessity of well-designed system of capital budgeting is strongly felt for various and important decisions and forecasts, some of which are given below:

- Formulation of Sound depreciation policy and the policy relating to replacement of assets.
- Preparation of cash forecasts, i.e. the likely amounts of cash required in different years.
- Decisions on replacing manual work by machines.
- Introduction of automation in industry.
- Formulation of Labour Welfare Policy- provisions of facility of housing, improvement of sanitation and working conditions, medical dispensary/hospital facilities, building of educational institution for worker's children, etc.

1.7 Impact on Future Cost Structure

Capital expenditures have chain of subsidiary cost, called fixed expenses. Installation of major plant, for example, necessitates the incurring of certain expenses which are fixed in nature. E.g. rent of the factory in which plant has been installed, technical staff expenses, insurance, etc. In case the acquisition has been done without judicious capital budgeting and the venture turns out to be flop, the concern will have to bear quite good amount of fixed expenses. Capital budgeting, thus, has importance, of its own and places a significant role in determining the future destiny of the business enterprise. Successive wrong decision on capital expenditure surely leads towards liquidation of the company.

1.8 Types of Capital Expenditure

Capital expenditure includes investment of funds in various fixed assets and different projects for development and expansion. Such expenditure is of long duration involving several years and commits the business concern to a particular pattern of activity. There can be various types of capital investment, which are stated below:

- **Expenditure on General Improvement:** Any expenditure which brings about the general improvement of the factory or establishment as a unit comes under this category, as, improving roads, laying sewerage lines, broadening parking space, providing rail sidings, making communication equipment more effective etc.

- **Replacement of existing Assets:** Worn out and depreciated assts need replacement. Keeping and using a plant, for example, for a period more than its effective life entails excessive expenditure on repairs and maintenance. In such cases, the return is less than the expenditure. It is always advisable to replace such assets well in time so that the facilities should remain at their original state.
- **Addition in Capacity:** The concern may like to add to the existing capacity of production due to increase in demand or since the concern has captured some foreign market. Additions to existing plant, equipment, store house, sales counters or show rooms may be made entailing a sizable amount of capital.
- **Purchase of New Equipment:** Sometimes, a manufacturing unit enters the production of a new item, not hitherto produced. Altogether different plant and equipment may have to be acquired. New type of factory may have to be constructed. For example, production of wheat flour and allied products requires a vertical type of structure, while many of the production lines require horizontal structures.
- **Cost Reduction and Quality Improvement:** Some expenditure may have to be incurred for acquisition of certain accessories or apparatus for checking wastage, defective production and improvement of quality.
- **Better Working Conditions:** Long term investment of funds is also made in such equipment or projects which ensure better working conditions, more safety to the workers, firefighting and control, and hygienic atmosphere. Provisions of the Factories Act, 1948 are to complied with in this respect. Provision of the relaxation rooms and creches for the babies of women workers is also made for the convenience of the workers.
- **Goodwill Projects:** To win the goodwill of the public at large, certain projects are undertaken to provide amenities to the public. Beautiful public parks, charitable hospitals, colleges, public libraries, temples, and community halls are some of the examples of these projects. These are sometimes called ‘Prestige value projects.

1.9 Factors Affecting Capital Investment Decisions

Before making any capital investment, the management must consider various alternate proposals thoroughly before taking such investment decisions. No doubt profitability and expected rate of return are the major considerations for the choice of the projects. However, there are other factors which the management cannot ignore. These must be given consideration before making a final decision on long term commitment of funds in a particular project. Sometimes the future rate of return on the investment made in these factors over rule the major consideration or rate of return on profitability. These factors are discussing as follows:

- **Urgency:** Situation may arise when the acquisition of a fixed asset is urgently needed, otherwise there is going to be a great loss or damage. Installation of power generators, for example, may have to be undertaken at a short notice due to prolonged shedding of hydel power. Such decisions need not clear the rigours of profitability tests.
- **Technical Feasibility:** Due consideration is to be given to the advice of the experts regarding the soundness of the project. The volume of production required for economic utilisation of the plant, power-consumption, overhead costs, running life, cost repairs and maintenance, availability of spare parts and availability of technical personnel-all these factors must be carefully gone into to assess the technical worth of the project.
- **Amount and Availability of Capital:** Most of the capital projects involve huge funds which must be committed for a long term. It must be ascertained what portion of funds would be available from internal resources and what portion is to be financed by borrowed funds. The rate of interest on such borrowings is also to be taken into account. A rate of interest higher than the rate of return from the proposed project would be a discouraging factor. Moreover, cash required at the various stages of the construction or installation of the capital asset also needs consideration. The amount of working capital to be required to commission the asset and to keep it going also must be determined. Non-availability of such capital may check the operation of the asset later as well.
- **Risk of Obsolescence:** With rapid advancement in technology, the risk of a capital assets particularly plant and equipment going out of date too soon is always present. There may appear improved versions or innovations which would replace the existing equipment, though otherwise serviceable. Managements would, therefore, prefer such projects which would pay back the investment in a lesser number of years.
- **Cost of Production:** Alternate projects may result in different costs of production, *e.g.* on cost of materials, productive wages, supervision, factory overheads, repairs and renewals, storage and cost of power.

- **Multiple uses of Assets:** It should be seen whether a particular asset has more uses than one. It may be that the original plan of product lines falls through and if the asset purchased is suitable for only that product, there would be much loss on its sale in the second-hand market. But if it has other uses as well, it can be profitably used.
- **Opportunity Costs:** Opportunity costs refer to the loss of alternative income on account of a particular capital investment decision. Since the resources are limited, a choice out of alternatives is to be made. The comparison of the alternative yields must be taken into account. The return which is likely to be received by the investment under consideration should be compared with return from an alternative project of the same cost.
- **Element of Interest:** There is a lack of unanimity among the accountants whether interest should be taken as one of the costs, while calculating the cost of a unit of product. But, as far as the decisions of long-term investment in capital assets are concerned, the question of interest is very important. Since the funds invested are of a massive size, the amount of interest is also quite large. Ignoring interest will bring in an error of judgment.
- **Depreciation:** While making a decision on a capital investment, a judicious view of depreciation is to be taken. The treatment here should differ from the cost accountancy procedure. To decide about the desirability of the replacement of a particular asset, the written down book value of the existing asset which is to be replaced, is not relevant. The existing asset is to be replaced because of the competitive conditions and the present book value, less realizable value, obviously is not recoverable. Rather the realizable (sale) value of the existing asset should reduce the cash outlay of the new asset. If the unrealized portion is added to the cost of the new asset, it would hamper the decision for replacement.
- **Other Considerations:** Financial considerations are not the only considerations which influence the capital expenditure decisions. There are non- financial reasons which prompt the management to incur capital expenditure. There are certain prestige projects or goodwill projects which are undertaken to win the goodwill of the community, the government or the industry. Public parks, charitable hospitals, research institutes, community balls, educational institution, temples and other such projects are of this type.

1.10 Techniques of Capital Budgeting

One of the aspects of project management is taking right decision in respect of investment of funds. The success of any business depends upon the investment of funds in such a way as to yield maximum rate of return from an investment. An investment is the employment of funds with the aim of achieving additional income or growth in value over a period. An appraisal of any investment proposal is necessary to ensure that the investment of resources will yield desired benefits in future. If the financial resources are in abundance, it would be possible to accept several investment proposals, which satisfy the norms of approval or acceptability. Since the financial resources are limited, therefore an entrepreneur must choose the best proposal out of the various investment proposals by evaluating their comparative merits. It helps him to identify relatively superior proposals keeping in mind the limited available resources. He must follow some techniques for making appraisal of investment proposals. So, in this module we shall describe the various appraisal methods and acquaint you with their relative merits so that you could identify the best method for appraising investment proposals in different situations.

At each point of time a project manager will have several investment proposals regarding various projects in which he can invest money. In such situations he must compare and evaluate all these projects and decide which one to take up and which one to reject. To maximise the value of the firm, it is imperative that the best or most profitable investment projects are selected. There are several techniques available for appraisal of investment proposals and can be classified as below:

1.10.1 Traditional Methods:

a) Pay-Back Period Method: Pay-back period method also known as pay-off or pay-out method is the most popular and widely accepted traditional method of evaluating capital investment proposals. Pay-Back period is the period in which the total investment in permanent assets pays itself back. It is based on the principle that every capital investment pays itself back over a period from the additional earnings of the project itself. It means where the total earnings from investment equals the total outlay, that period is the pay-back period. Suppose, a fixed asset costs Rs1,00,000 and the additional earnings from this asset over the first five years are Rs24,000, Rs36,000, Rs40,000, Rs40,000 and Rs32,000 respectively. The payback period in this case would be three years because the total investment gets fully recovered by the earnings of the first three years i.e. Rs24000 + Rs36,000 +Rs 40,000 = Rs1,00,000. For this purpose, net cash inflow shall be calculated first in the following manner: -

Cash inflow from sales revenue	×
Less: Operating expenses including depreciation	×
Net income (before tax)	×
Less-Income tax	×
Net income (after tax)	×
Add depreciation	×
Net cash inflows	×

Note: - Since depreciation does not affect the cash inflow therefore it has not been taken into consideration in calculating net cash inflow. But it is allowed as an admissible deduction under income tax act.

(i) Computation of Pay-back Period Method

$$\textbf{Pay-back period} = \frac{\textbf{Original Investment}}{\textbf{Annual Cash-inflow}}$$

(ii) Merits of Pay-back Period Method

Pay-back period method is strongly recommended for evaluating the capital investment proposals. The merits of this method are as follows:

- Easy to calculate and simple to understand. It is a good indicator of how quickly the amount invested is going to be recovered.
- It provides a convenient measure of the profitability of alternative projects and aids in making the choice.
- Useful where the firm is suffering from cash deficiency.
- Liquidity requirement requires earlier cash flows. Hence, firms having high liquidity requirement prefer this tool because it involves minimal waiting time for recovery of cash outflows.
- Business enterprises facing uncertainty – both of product and technology, prefer this method due to technological obsolescence and product obsolescence.
- It is a handy tool for evaluating investment proposals where accuracy in estimates of profitability is not vital.

(iii) Limitations of Pay-back Period Method

The pay-back method suffers from the following limitations:

- This method ignores the post pay back annual cash inflows.
- This method ignores time value of money. Sums to be received in future should be discounted to current values.
- It overlooks the cost of capital
- The method is not flexible. A small change in cost of production will affect the cash inflows and as such it will also affect pay-back period.
- It over-emphasizes the importance of liquidity as a goal of capital investment decisions.

b) Accounting Rate of Return: A reasonable rate of return on investment is desired by every business house. So, this method takes into account the earnings expected on investment over their whole life. Where the decision is to be taken for the purpose of evaluating capital investment proposals, earnings from the capital investment is being calculated. It is the minimum rate of return (called as cut-off rate) below which the firm may decide that they will not undertake any project. The rate of return is to be decided by the management. Under this method, profits are taken based on accounting concept i.e. profits after depreciation and tax. Out of the various alternative capital projects, the one that gives the highest rate of return, in general, would be more acceptable than others. Profitability, thus, becomes the basis of capital expenditure decision. Average Rate of Return (or Accounting Rate of Return) method calculates the profitability of the different proposals in the following manner:

(i) Meaning of Rate of Return

'Rate of Return' is the ratio of earnings to investment. There are, however, two principal variations in this

1) $$\frac{\textbf{Average Annual Earnings from the project}}{\textbf{Original Investment in the project}} \times 100$$

2) $$\frac{\textbf{Average Annual Earnings from the project}}{\textbf{Average Investment in the project}} \times 100$$

(ii) Average Annual Earnings

These are computed by totalling the expected annual profits (after taxes) of all the years during the life term of the project and dividing the total y the number of years. Average Annual Earnings may be expressed in three ways:

- Earnings before depreciation and taxes.
- Earnings before depreciation but after taxes.

- Earnings after depreciation and taxes.

The management should, obviously, use the similar connotation for all capital decisions.

- **Original Investment**

It refers to the Total Cost of Project till its commissioning **minus** any Salvage value.

- **Average Investment**

It means the **original cost divided by 2** and where there is some salvaged value recoverable at the end of the life of the asset, it would be:

= ½ (Original Cost-Salvaged Value) + Salvaged Value.

The average investment approach is more realistic than the original investment approach, since, the investment gradually decreases over the number of years. It is assumed that the value of the asset at the end of its life is reduced to zero or its Salvaged value is based on the straight-line method of depreciation.

(iii) Most Popular Formulation

Out of the variations of Average Annual Earnings given above, the most widely adopted variation is, ***Earnings After Depreciation and Taxes***, hence, the most popular formulation for **Average Rate of Return** is as below:

$$\frac{\textbf{Average Annual Earnings after depreciation and taxes}}{\textbf{Average Investment}} \times \mathbf{100}$$

(iv) Merits of Average Rate of Return Method

- The main advantage is that it is simple and easy to calculate.
- Easy to understand as it provides an accurate estimate of the time needed for the organization to recoup the cash invested.
- The concept of accounting rate of return is a familiar concept to calculate ROI. The profits are calculated based on accounting concept. i.e. Profit after depreciation and taxes.
- It provides sound yardsticks for comparing the profitability of different projects.
- ARR considers all net incomes over the entire life of the project and provides a measure of the investment's profitability.

(v) Limitations:

- ARR method also ignores the time value of money and considers the value of all cash flows to be equal.

- This technique uses accounting numbers that are dependent on the organization's choice of accounting procedures and practices.
- The method uses net income rather than cash flows. While net income is a useful measure of profitability, the net cash flow is a better measure of an investment's performance.
- Ascertainment of fair rate of return on capital invested is quite difficult.

c) Discounted Cash Flow Methods: Discounted cash flow methods sometimes also called as Time-adjusted techniques, are an important tool in the hands of the management to evaluate the profitability of the capital expenditure. The basic characteristic of these techniques is the concept of *Cash Flow*. The cash flows are discounted to the present value because the value of a rupee today cannot be equivalent to the value of a rupee after two years. So, time value of money is considered both for amount invested and cash flows generated from that investment. Discounted cash flow techniques, thus, overcome the shortcoming of the Pay-back Period method by taking into account the entire period of use. These techniques are mainly of two types:

(i) Net Present Value Method: Net Present Value (NPV) is considered as the most suitable technique of evaluating the capital investment proposals. It takes into account the time value of money. An investment has cash flows throughout its life, and it is assumed that a rupee of cash flow in the early years of an investment is worth more than a rupee of cash flow in a later year.

Where the decision is to be taken for evaluating the capital investment proposals cash inflows and cash outflows associated with a particular project are firstly be worked out. Then present value of cash inflows and present value of cash outflows are calculated at the rate of return which is acceptable to the management. This rate of return is considered as the "Cut off rate" and is generally determined based on cost of capital suitably adjusted to allow for risk element involved in the project. Cash outflows represent the investment and commitment of cash at different point of time and Cash inflows represent the profits before depreciation and after tax. Net present value (NPV) is the difference between the present value of the future cash inflows from an investment and the present value of cash outflows. Present value of the expected cash inflows is computed by discounting them at the required rate of return. The following are the steps to calculate net present value:-

- Determine the net cash inflows in each year of the investment
- Select the desired rate of return

- Find the discount factor for each year based on the desired rate of return selected
- Determine the present values of the net cash inflows by multiplying the cash inflows by the discount factors.
- Total the amounts of cash inflows discounted at the cut off rate for all years in the life of the project
- Lastly subtract the present value of initial capital investment.

(ii) Accept or Reject Criteria:

If Never Accept the proposal

If NPV<Zero Reject the Proposal

Symbolically it is written as:

$$\mathrm{NPV} = \frac{C}{(1+r)^n}$$

Where, Net Present value of (NPV) of the future sum (C) to be received after a period „n‟ for which discounting is done at an interest rate of 'r'.

(iii) Merits of Net Present Value Method

Present Value Method is a definite improvement upon the traditional methods. So many good points have been attributed to it:

- While assessing the profitability of a project, it takes into account the total working life of the asset.
- It is more objective in its approach, since subjective decisions like depreciation do not have any effect upon it.
- Discounting of the cash inflows arising in future allows a proper appreciation of the soundness of the project or otherwise. It is suitable for long term investment decision.
- This method has the unique characteristic of matching of cost of borrowing money for investment into fixed assets with the expected return on such investment. This comparison is made valid by calculating the present values of amounts receivable in the time to come.
- By taking time factor into consideration, possible risk and uncertainly of a project are dully recognised.

(iv) Limitations of NPV Method

The pay-back approach suffers from the following limitations:

- Forecasting of sales and costs to determine future inflows of cash is a difficult task. Errors in such forecasting may lead to serious mistakes at decision-making.

- What is the appropriate rate of interest? To answer this question, it is not easy. Various rates of interest can be considered. A discount (or interest) rate appropriate at present may be irrelevant in a future period.
- It involves too many calculations. When alternative projects are considered, the task of finding out cash inflows and determining their present values requires time, labour and energy.

The criticisms are more apparent than real. As Anthony and Reece put it, "Those managers who do use one of the discounting methods argue that the extra work involved is small, and that the results, although admittedly rough, are nevertheless better than the results of calculation that do not take into account the time value of money.

1.10.2 Internal Rate of Return (IRR) Method

IRR method which is sometime called as Time-adjusted rate of return method, Project rate of return of method, Yield method, Trial and Error Yield method, is also a modern technique for evaluating the capital investment proposals which discounts the cash flows according to time involved. Under present value method a discount rate was used to calculate the present values of cash inflows. And while evaluating the project, the project which has the highest Net Present Value was ranked at the top.

Under the Internal Rate of Return (IRR) method, no rate of interest is given, rather the rate of interest is to be found out which makes the present values of cash inflows exactly equal to the amount invested in the project. The Internal Rate of Return of a project is thus that discount rate which equates the total present value of the cash inflows (net) with the total initial cost. In other words, it is a rate at which the net present value becomes Zero.

(i) Internal Rate of Return:

Discounted sum of Inflows = Discounted sum of Outflows

(ii) Computation of Internal Rate of Return

The following steps may be taken to calculate IRR:

Scenario 1: For an investment with uniform cash flows over its life, the following equation is used:

Step 1: Calculate the Present Value Factor by dividing the cost of investment by annual cash flow i.e.

$$\text{Present Value Factor} = \frac{Cost\ of\ Investment}{Annual\ Cash\ Flow}$$

Step 2: Once the Present Value Factor has been calculated, compare the Present Value Factor with the number of years equal to the life of the asset with the help of Present Value

Annuity Tables. The rate of discount at which Present Value of an Annuity for estimated life of the project equates the Present Value Factor, will be the Internal Rate of Return of the project.

Scenario 2: When the net cash flows are not uniform over the life of the investment, the determination of the discount rate can involve trial and error and interpolation between interest rates. The following steps should be followed:

- Assume the rate of discount at which Present Values of Cash Inflows should be factored.
- Calculate the present value of cash inflows by using the assumed discount rate.
- Compare the total present value of cash inflows with the cost of the project.
- If the total present value is more than the capital cost, then assume the higher rate of discount at which the present values should be factored.
- If the total present value is less than the capital cost, then assume the lower rate of discount at which the present values should be factored.
- Repeat the procedure until the present value of cash inflows equals to the cost of the project.

(iii) Merits of Internal Rate of Return Method

Time adjusted calculations are better to use than unadjusted amounts. This method has also the same advantages as the Net present Value method claims as is given below:

- It takes into account the full span of the working of an asset.
- It is more objective since subjective considerations like depreciation etc. to not prejudice it.
- Money has a time value. This method recognizes the importance of this in its analysis.
- Ranking of the projects becomes purposeful as this method matches the present value of cash outlay and cash inflows.
- Comparison becomes valid only when the earnings are discounted to present values, since different investments have different earnings patterns.
- Due recognition is given to risk and uncertainty in future.

(iv) Limitations of Internal Rate of Return Method

IRR method, no doubt, considers the time value of money but still this method bears certain limitations which are discussed as follows:

- Tedious calculation process if there are more than one cash outflows.

- This approach creates a special situation if we compare two projects with different inflow/outflow patterns.
- Under this method it is assumed that all the future cash inflows of a proposal are reinvested at a rate equal to the IRR. It is difficult to imagine that the same firm has an ability to reinvest the cash flows at a rate equal to IRR.
- If an investment is to be made in two mutually exclusive projects which have considerably different cash outlays. A project with a larger commitment of funds but lower IRR contributes more in terms of absolute NPV and increases the shareholders‟ wealth. In such situation decisions taken only based on IRR criterion may not be correct.

1.11 Self-Check Exercise

1. What do you mean by project budgeting?
2. Define capital budgeting.
3. What are the features of capital budgeting?
4. What is the importance and need of capital budgeting?
5. Write a short-note on types of capital expenditure.
6. Write a short-note on significance of techniques of capital budgeting.

1.12 Summary

The future development of an enterprise depends on the capital investment projects. These projects may be the replacement of existing capital assets which turns out to be less attractive to the firm or expansion of business for implementing new ideas and planning. Thus, long term investment decisions of an enterprise fall within the definition of project budgeting or capital expenditure decisions. These decisions are concerned with the acquisition of assets in which funds will be invested by an enterprise. The term Project Budgeting/Capital Budgeting refers to long term planning for proposed capital expenditure and their financing. It includes both raising of long-term funds as well as their utilization. Project budgeting is the decision-making process by which a firm evaluates the acquisition of its major long term/fixed assets. It involves an enterprise's decision to invest its current resources for addition, disposition, modification and replacement of fixed assets. Project budgeting is very important for an enterprise due to huge amount of investment, irreversible in nature, lack of flexibility, its impact on future cost structure etc. Before making any capital investment, the management must consider various alternate proposals thoroughly before taking such investment decisions. No doubt profitability and expected rate of return are the major considerations for the choice of the projects. However, there are other factors which the management cannot ignore like urgency, availability of capital, risk of obsolescence, cost of production, opportunity cost etc. The success of any business depends upon the investment of funds in such a way as to yield maximum rate of return from an investment. An investment is the employment of funds with the aim of achieving additional income or growth in value over a period. An appraisal of any investment proposal is necessary to ensure that the investment of resources will yield desired benefits in future. Since the financial resources are limited, therefore an entrepreneur must choose the best proposal out of the various investment proposals by evaluating their comparative merits. He must follow some techniques for making appraisal of investment proposals. At each point of time a project manager will have several investment proposals regarding various projects in which he can invest money. In such situations he must compare and evaluate all these projects and decide which one to take up and which one to reject. Capital budgeting techniques help him to identify relatively superior proposals keeping in mind the limited available resources. The techniques of capital budgeting are broadly discussed in two categories i.e. traditional techniques and discounted cash flow techniques. Traditional techniques are Pay-back period and Accounting Rate of Return and Modern techniques or Discounted Cash Flow techniques are Net Present Value and Internal Rate of Return.

1.13 Glossary

- **Capital:** It is a broad term for anything that gives its owner value or advantage, like a factory and its equipment, intellectual property like patents, or a company's or person's financial assets. Even though money itself can be called capital, the word is usually used to describe money used to make things or invest.
- **Capital budgeting:** It is a process that businesses use to evaluate potential major projects or investments. Building a new plant or taking a large stake in an outside venture are examples of initiatives that typically require capital budgeting before they are approved or rejected by management.
- **Project budget:** It is the total projected costs needed to complete a project over a defined period. It is used to estimate what the costs of the project will be for every phase of the project. Creating a project budget is a critical part of the project planning process.

1.14 Answers to Self-Check Exercise

1. For answer, refer to section 1.2.
2. For answer, refer to section 1.3.
3. For answer, refer to section 1.4.

4. For answer, refer to section 1.5.
5. For answer, refer to section 1.8.
6. For answer, refer to section 1.10.

1.15 Terminal Questions

- What do you mean by project budgeting? Discuss its features and significance.
- Define capital budgeting. Discuss its need and importance.
- Describe the various types of capital expenditure.
- What factors have their impact on the capital investment decisions? Discuss
- Discuss the traditional methods of capital budgeting.
- Describe the internal rate of return method.
- What are the techniques of capital budgeting? Discuss their significance in project management.

1.16 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
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- Chandra, Prasana: Project Planning Analysis, Financing Implementation and Review. TATA McGraw Hill, New Delhi.
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Lesson 2

Planning Capital Structure and Financing Project

Structure

2.0 Introduction

Every entrepreneur needs finance to carry out business activities smoothly and to achieve his targets. It is an important input for any type of business, whether big, medium or small and is needed for working capital as well as investment in permanent assets. Funds invested in a business are obtained from various sources. The capital invested in a business may be owners' capital or borrowed capital or both. While some of the funds are held in business on permanent basis such as share capital and reserves, some others are held for a long-term basis such as debentures, bonds, public deposits etc. and still some other funds are short-term borrowings. The entire composition of these funds constitutes the overall financial structure of an enterprise. The short-term funds keep on shifting quite often. Therefore, the proportion of various sources for short-term funds cannot rigidly be laid down. An entrepreneur must follow a flexible approach. A policy must be laid down for the composition of long-term funds, known as capital structure**.** The most important aspects of the policy are the debt equity ratio and the dividend decision. Dividend decisions affect the building up of retained earnings, which is an important component of owned capital. The long-term funds occupy a large portion of total funds and involve long-term policy decision about the proportion of various kinds of securities which is often used to mean the capital structure of the firm.

2.1 Learning Objectives

After studying this lesson, students should be able to understand the:

- Concept, meaning, process, planning, determinants of capital structure.
- Concept, meaning, sources of finance.

2.2 Meaning of Capital Structure

The term capital structure refers to the relationship between various forms of financing such as equity share capital, preference share capital and debentures. It is the decision-making process which determines the proportion among various types of securities to total capitalisation. Gerstenberg defines *Capital Structure as the types of securities issued by a company and the proportionate amount that make up capitalisation*. In other words, it refers to the composition or make up or mix of capital i.e. in what proportion equity capital, preference share capital, debentures etc. have been issued. But the question arises how this proportion is to be determined. Gerstenberg has laid down the following two general principles:

- The greater the stability of earnings, the higher may be the ratio of bonds to stock in the capital structure.
- The capital structure should be balanced with a sufficient equity cushion to absorb the shocks of business cycle and to afford flexibility.

2.3 Process of Capital Structure

A capital structure decision refers to deciding the forms of financing i.e. which sources to be tapped, their actual requirement and the relative proportion in total capitalisation. Thus, whenever funds are to be raised for long term perspective to finance investment, capital structure decision is involved. The form or quality of financing in capital structure depends upon the nature of requirement of finance. The process of financing or capital structure decision is shown in the figure below:

So, every capital structure decision affects the value of the firm and the optimal capital structure is one which increases the value of the firm and decreases its cost of capital. As shown in the figure every capital expenditure requires a huge amount of funds which can be raised through debt capital or equity capital. Both the modes of financing have their own features and limitations but generally a finance manager prefers to raise the funds by using appropriate ratio of debt equity mix to yield a maximum return and minimize the cost of capital.

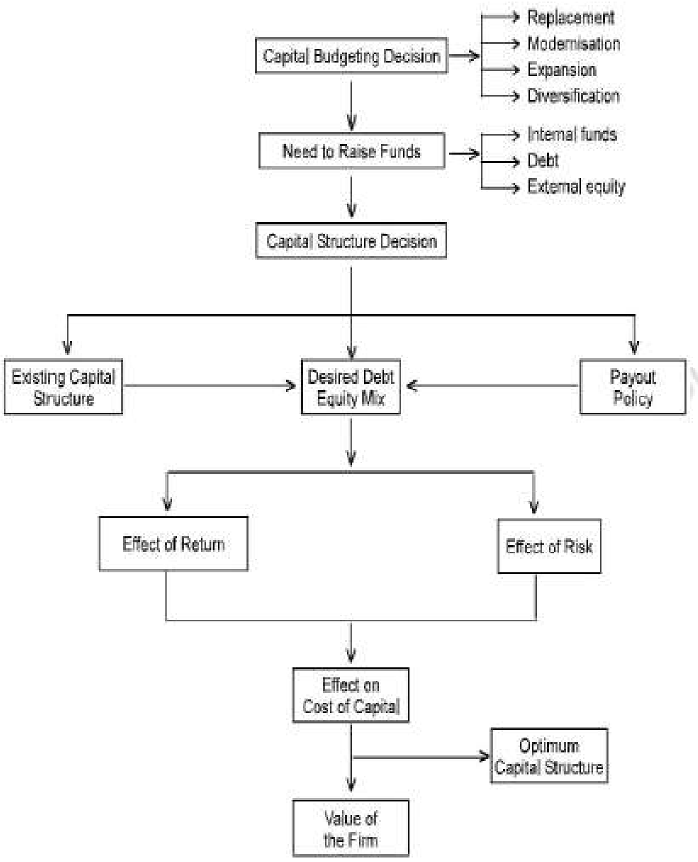

Figure: Process of financing or capital structure decision

Capital Gearing: The concept of Capital Gearing is closely related to the pattern of the capital structure of a company. It refers to the ratio between various types of securities of a company. That is the ratio between equity capital, preference capital plus debentures. It can be written as:

Capital Gearing = Equity Capital: [Preference Share Capital + Debentures]

- A company is said to be highly geared if the proportion of preference shares and debentures is higher than equity share capital (including reserves and surpluses belonging to equity shareholders)
- A company is said to be low geared if the proportion of preference shares and debentures is low as compared to equity share capital.

2.4 Planning of Capital Structure

Planning the capital structure of a company has a great importance because of its prospective impact on profitability and solvency. Small organisations often do not plan their capital structure rather allowed to develop it without any formal planning. They may do well in the short run, however, eventually they face considerable difficulties. Without proper planning of capital structure, an economical use of funds for the company is not possible. An enterprise should therefore plan its capital structure in such a way that it derives maximum benefits out of it and is able to adjust it with the change in economic conditions.

Theoretically, optimum capital structure should be planned by the company in such a way that the market value of its shares is maximum. The value of the firm will be maximized when the marginal real cost of each source of funds is the same. The discussion on the issue of optimum capital structure is highly theoretical. But to determine an optimum capital structure we must go beyond the theory. That is why capital structure is found different from company to company even within the same industry. Several factors influence the capital structure decision of a company. Finance manager plays a crucial role in making the capital structure of a company. Two similar companies can have different capital structures if the decision makers differ in their approach. There are many factors affecting the role of decision maker. These factors are qualitative, complex and highly psychological and do not always follow the accepted theory. Security markets are not always perfect and the decision has to be taken with imperfect knowledge and consequent risk.

2.5 Optimal Capital Structure

Optimal capital structure is one that maximizes value of business, minimizes overall cost of capital i.e. flexible, simple and futuristic that ensures adequate control on affairs of the business by the owners and so on. Capital structure is usually planned keeping in view the interests of the ordinary shareholders. The ordinary shareholders are the ultimate owners of the company and have the right to elect the directors. While developing an optimal capital structure for the company, the financial manager should aim at maximizing the long-term market price of equity shares. The optimum capital structure may be defined as "that capital structure or a debt-equity mix that leads to the maximise value of the firm". It maximizes the value of the company and hence the wealth of its owners and minimises the company's cost of capital. Thus, every business enterprise should aim at achieving the optimal capital structure and tries to maintain it. The following considerations should be kept in mind while maximising the value of the firm:

- The capital structure of the firm should be simple. Simplicity means that minimum number of securities should be used in the capital structure. If capital structure becomes complicated in the beginning, it can be difficult to maintain it in future.
- The capital structure should bear the minimum cost of capital. The cost of capital takes the form of interest or dividend. Different sources have different costs. Certain securities have lower cost as compared to others. By obtaining funds at less costs, a

company can avail the new opportunities of investment in future. Therefore, it should determine a capital structure in which weighted average cost of capital is minimum.

- An enterprise should not use financial leverage beyond a certain limit because it will increase financial risk. If the shareholders perceive high risk in using further debt capital, it will negatively affect the market price of the shares.
- Capital structure of the firm affects the level of risk also. The use of borrowed funds in capitalisation increases the level of risk because interest on such funds must be paid before paying the claims of shareholders. Greater use of borrowed funds can result in availability of future funds at high cost. Therefore, while determining capital structure, efforts should be made to minimise the risk.
- The capital structure of the firm should be flexible so that it can be easily altered at the time of need. Whenever there is increase in the size of the business, new sources of capital could be added to it and at the time of reduction of the size, surplus sources could be repaid easily.

2.6 Determinants of Capital Structure

Capital structure plan is to be prepared very carefully, initially at the time of promotion of company. First, the objective of the capital structure should be determined and then the financing decisions should be taken accordingly. Company must arrange funds for its business activities continuously. Every time when the funds are to be procured, project manager must choose the most profitable source of finance after considering the merits and limitations of different sources of finance. Therefore, capital structure decisions must be taken on continuous basis. Generally, the factors to be considered whenever a capital structure decision is taken are:

- **Trading on Equity/Financial Leverage:** Trading on equity is an arrangement under which an enterprise uses long term debts carrying a fixed rate of interest in such a manner to increase the rate of return on equity shares. It refers to the additional profit that equity shares earn because of issuing other type of securities such as preference share capital, debentures, bonds etc. It is based on the theory that if the rate of interest on debentures and rate of dividend on preference shares, which is fixed, is lower than the general rate of company's earnings, equity shareholders will get the advantage of higher dividend per share. While planning the capital structure of a company, financial leverage is considered as one of the important considerations due to its effect on the earnings per share. The greater the Earnings Per Share (EPS), more profitable it will be for the ordinary shareholders.

- **Cost of Capital:** The cost of a source of finance is the minimum rate of return expected by its suppliers. The expected rate will depend upon the risk borne by the investors. Ordinary shareholders bear the maximum risk because no rate of dividend is fixed for them and the dividend is paid after the payment of interest and preference dividend. The payment of interest on debentures is a statutory liability of the company whether the company earns profits or not. Therefore, debt is cheaper as compared to ordinary share capital. Cost of debt becomes lesser because interest on debt is a charge against the taxable income. But debt is cheaper only up to a particular point and the company cannot always decrease the overall cost of capital by using debt. Later, debt can be costly because use of more debt raises the risk for both the creditors and the shareholders.
- **Regular & Stable Cash Flows:** The sale and stability of cash flows affect the quantum of leverage. The companies which have stability in income and sales, can use more amount of debt in their capital structure. They can easily pay their fixed financing charges. The industries producing consumer goods face more fluctuations in their sales and, therefore, use lesser amount of debt. On the other hand, income and sales of public utility institutions are more stable and therefore, they can use more debts in financing their assets. Expected increase in sales also affects the amount of leverage. This is the reason that developing companies use more debt in their capital structure. The companies, whose sales are decreasing, should not use debt or preference share capital because they can face difficulty in the payment of interest and preference dividend, as result of which the company could be liquidated.
- **Control:** In present times, management wants to maintain its existence continuously and does not want any outside interference. Ordinary shareholders have legal right to appoint directors. If the company is paying interest and instalment of loan in time, the creditors of company cannot interfere in managerial decisions. Similarly, preference shareholders do not have voting rights. But in case the company is unable to pay dividend to the preference shareholders for certain period, the preference shareholders get a right to participate in the meetings of the company. Thus, in most of the circumstances, ordinary shareholders get a right to appoint directors. If the main objective of the management is to keep control in the existing hands, it will raise additional finance from debt and preference shares because it will not adversely affect its control.

- **Flexibility:** Flexibility means the firm's ability to make adjustment in the sources of finance at the time of change in needs of funds. Capital structure of a company is called flexible when it does not face any difficulty to change its capitalisation or the sources of finance. Therefore, the management should take into account the future effects on the present capital structure. Whenever a company needs finance for profitable investment, it must be able to raise necessary funds without delay and at reasonable cost. If less amount of funds is required, company must be able to redeem the debentures and preference share capital. Flexibility in the capital structure depends on flexibility in fixed expenses, restrictive conditions in the debt agreement, terms of redemption and debt capacity.
- **Size of the Business:** Small businesses must face great difficulty in raising long-term finance. For procuring long term loan, it must accept unreasonable conditions and high rate of interest. Such restrictive conditions make the capital structure inflexible for small companies and management cannot freely run the business. Therefore, small businesses rely on share capital and retained earnings to meet their requirement of long-term funds. Small companies must bear greater cost of raising long term funds as compared to large companies. Moreover, small companies do not allow expanding their business much and managing their funds out of retained earnings. Large companies can raise their long-term loans comparatively at flexible terms and can issue ordinary shares and preference shares to the public. Therefore, while preparing capital structure plan, company should make proper use of its size.
- **Floatation Costs:** Floatation costs are incurred at the time of issue of securities. These costs include commission, brokerage, stationery and other expenses. Normally the cost of debt is less than cost of issuing shares. Therefore, the company can be attracted towards the loan funds. In case of retained earnings, no such issue expenses need to be incurred. But flotation costs are not the most important factor in capital structure decisions. If the amount of issue is increased, the percentage of floatation costs can decrease.
- **Capital Market Conditions:** While taking decision on the capital structure, tendencies of the capital market should be taken into account because these affect the cost of capital and availability of funds from different sources. Sometimes, company wants to issue ordinary shares but the investors do not want to invest in that company due to high risk. In such a situation, company should not issue shares and necessary funds should be

raised from other sources. Therefore, timing of the issuance of securities to the public is an important factor affecting the capital structure of a company.

- **Gestation Period:** Gestation period refers the period between starting of project construction and first commercial operation of the project. If the gestation period is longer, more equity financing will be advised as there will not be need for servicing of capital in the initial times.
- **Forms of Business Organisations:** Control is much significant in case of private companies, sole traders and partnership firms because in such businesses, ownership is limited to a few hands. In public limited companies, ownership is widely spread. Therefore, control cannot be restricted.
- **General Economic Conditions:** If an economy is recovering from depression, the business activities in the country will expand. The possibilities of development of business will increase due to it. As a result, company may require additional funds in the future. In such cases, management should give more importance to the flexibility of capital structure so that it may be able to raise funds from alternate sources to meet its need. The company, in such situation, should issue ordinary share capital rather than debt.
- **Statutory Restrictions:** Capital structure decisions of the company are also affected by the government regulations. The statutory restrictions prescribed by the Government and various statutes are required to be taken into consideration before the capital structure is planned.
- **Corporate Taxation:** Due to current provisions of tax, the use of debt in the capital structure is cheaper as compared to the ordinary share capital or preference share capital. Interest is chargeable expense from the taxable income, whereas dividend is paid out of earnings available after tax. Hence, level of tax affects the cost of capital. Therefore, to take the advantages of trading on equity, management uses more debt capital in the capital structure which helps in increasing the income of the shareholders.

2.7 Financing

Finance is the life blood and nerve centre of a business irrespective of its size, kind or nature. Just as circulation of blood is essential in the human body for maintaining life, finance is very essential for smooth running of the business. A project manager must acquire funds from different sources to meet the financial requirements of business. Adequate finance is necessary for the efficient operation of business. Neither any business can be established nor its development and expansion are possible without adequate finance. Based on time, financial requirements of a business can be divided into three parts:

- **Long-term requirements of Funds:** The requirements of funds for more than five or seven years are called long term requirements of funds. Long term requirements of funds should be met from long term sources. Long term funds are required for the purchase of fixed assets, arrangement of permanent working capital and payment of preliminary expenses. Fixed assets include land, building, plant & machinery, furniture & fitting, patents, goodwill, livestock etc. Fixed assets are used in the business for a long period to earn profits. Preliminary expenses are incurred by the promoters at the time of promotion of company. Similarly working capital is also needed for the business.
- **Medium-term requirements of Funds:** Medium term requirement of funds occurs for a period of one to five or seven years. Such funds are required for the projects which are neither of a fixed nature nor of current nature. These funds are needed for the replacement of machinery and equipments or heavy improvements in them, for research and development and heavy expenditure on advertisements etc.
- **Short-term requirements of Funds:** Short term funds are needed for a period of less than one year. Short term funds are needed for expenses of routine nature like purchase of goods, payment of salary, wages, rent etc. Therefore, arrangement of adequate working capital must be made under short term financing. Short term financial requirements should be met from short term sources.

2.8 Sources of Finance

It is worth noting that long term financial requirements should be met from the long-term sources, medium term requirements from the medium-term sources and short-term requirements from the short-term sources. Therefore, a project manager must maintain proper balance in the long term, medium term and short-term sources of funds. Sometimes, it is difficult to differentiate in the long term and medium-term sources. Certain businesses use the funds acquired from the short-term sources for the purchase of fixed assets. But it is not considered proper as per the principles of project management because it decreases the liquidity of business and the problem of prompt payment may arise. Similarly, if the funds acquired from the long-term sources are used for fulfilling short term requirements, it will be misutilisation of funds as the funds of business will remain unutilized which will reduce profitability. Project manager should also maintain proper balance in owned capital and borrowed capital. If all the requirements of business can be met out of equity capital and reserves and surplus, it will be deprived of the benefits of trading on equity. On the other hand, if all financial needs are met by borrowed capital, there would be fixed burden of interest on business. Therefore, it can be said that, through financial planning, proper balance between owned capital and borrowed capital and among long term, medium term and short-term sources should be established. The sources of finance-long term, medium term and short term are different for business. Different sources of finance can be outlined as under:

2.8.1 Sources of Long-term Finance

Sources of long-term finance can be divided into two parts such as ***Owned Capital*** is provided by the owners of business and includes ordinary shares, preference shares and reserves. On the other hand, ***Borrowed Capital*** is raised as long-term loan from the borrowers. Main sources of borrowed capital include debentures, bonds, lease financing and long-term loans. In India, specialized financial institutions have been established for providing long term loans.

2.8.2 Sources of Medium-term Loans

Medium term loans can be made available from various sources. Medium term sources include loans from financial institutions, redeemable preference shares, redeemable debentures, public deposits, purchases under Hire Purchase System and accumulated profits.

2.8.3 Sources of Short-term Loans

Sources of short-term funds include bank loans, public deposits, advances from customers, provision for taxes and credit purchases, commercial papers etc.

2.8.4 Sources of Long-term & Medium-term Finance

a) Equity Shares: Equity shares have an important place in the capital structure of a company. Ordinary share capital is the base debt and preference share capital. Ordinary shareholders are the actual owners of the company and have full voting rights. They take part in the management of the company through the appointment of directors. They have unlimited interest in the incomes and assets of the company. The main objective of the company is to maximise the value of shares held by shareholders. Ordinary shareholders bear all the risk. There is no predetermined rate of dividend for them. Ordinary shareholders have the right on that income which is left after payment of interest and preference dividend. Similarly, on liquidation, they have the right on those assets which are left after payment of all liabilities and preference share capital. Therefore, following are the main characteristics of equity shares:

- **Maturity:** From the ordinary shares, company gets fixed capital for which the company is not bound to pay during its life time. The shareholders can demand their capital only at the time of liquidation. At the time of liquidation, they will get their capital back only if, there is any balance left after pay-off other liabilities. Company cannot bind its shareholders to sell their holdings.

- **Claims on Income:** Equity shareholders of the company are residual owners of income of the company. Their right on income arises only when there is any income left after payment of interest and preference dividend. Even if the company has profits, shareholders cannot force the company to pay dividend to them/. Whole of the profits can be ploughed back for expansion, development and strengthening the financial position of the company. In actual practice, the company pays dividend at a reasonable rate in the event of adequate earnings so that shareholders may have faith in the company. No rate of dividend is fixed. It depends on the policy of the management and quantum of profits.
- **Claims on Assets:** Being the residual owners, the ordinary shareholders have last claim on the assets of the company. At the time of liquidation, the assets of company are sold and first the claims of creditors and preference shareholders are settled without making any payment to the ordinary shareholders. Whatever the balance is left, ordinary shareholders have full right on it and it is distributed among them in proportion to their holdings. Ordinary share capital provides safety to the interests of creditors.
- **Control:** Ordinary shareholders have full right of management and control of the company. Each shareholder has voting right in the meetings of the company in proportion to his holdings in the company. For the operation and control of the company, they appoint directors who act as their representatives. They have right to remove the directors also. If a shareholder cannot present himself in the meetings of the company, he can use proxy.
- **Right of Pre-emption:** Although the ordinary shareholders cannot force the company to distribute dividend, yet they have been given right to have proportionate interest in the assets, income and control of the company. For this purpose, they have preferential right to purchase the new shares issued by the company. It is the statutory obligation of the company that it should present new shares to the existing shareholders first. This right of the ordinary shareholders is called right of pre-emption. Each shareholder can exercise this right in proportion to the shares held by him. For example, if a shareholder has 200 shares and company has total issued capital of 2,000 shares, he will have right to purchase 10% of the new shares of the company.

b) Preference Shares: Preference share capital is another source of providing long term finance. Preference shares are those shares which have preferential rights regarding the payment of dividend and repayment of capital over the equity shareholders. Equity shareholders cannot be paid any dividend unless dividend at a fixed rate is paid to preference shareholders. In other words, they are paid the dividend out of the earnings after interest and taxes but before any dividend to equity shareholders. Similarly, at the time of liquidation repayment of capital to the preference shareholders is made after settling the claims of creditors and debentures but before making any payment to equity shareholders. Due to these two preferential rights, these shares are called Preference Shares. The main characteristics of preference shares are outlined below:

- **Maturity:** The Company gets fixed capital from the preference shares like the equity shares and it is not bound to repay it. But many times, the companies issue redeemable preference shares and fix the time of their redemption under the terms of issue. Such shares are called Redeemable Preference Shares. Redeemable preference shares are redeemed at the option of the company but according to the terms of issue. Sometimes, the companies issue convertible preference shares also. As a result, the preference shareholders have the option to convert their shares in the equity shares of the company. The ratio in which these shares can be converted into equity shares is explained by the articles of the company. The main objective of issuing convertible or redeemable preference shares is to make the capital structure of company more flexible.
- **Claims on Income:** Preference shareholders have the preference in relation to dividend over the equity shareholders. They are paid a fixed rate of dividend based on predetermined terms. Equity shareholders cannot be paid any dividend before making any payment to preference shareholders. But it does not mean that it is statutory obligation to pay dividend to the preference shareholders. Even in case of income, they cannot legally compel the company to pay them the dividend. The distribution of dividend depends upon the decision of the Board of Directors. But if the decision for distribution of dividend has been taken, dividend the preference shareholders will have to be paid dividend prior to equity shareholders.

Sometimes, the preference shareholders are offered to participate in the additional income of the company, over and above their fixed rate of dividend. Such shares are called Participating Preference Shares. As already said, that in case there are inadequate profits or the company suffers losses, it is possible that no dividend is paid on preference shares. But many companies arrange for paying the amount of dividend of such years in the coming years. Such shares are called Cumulative Preference Shares. If at the time of issue of the shares, it is not cleared whether these shares are cumulative or non-cumulative and no provision has been made in the Articles, these shares will be considered as Cumulative Preference Shares. The main objective of the Cumulative Preference Shares is to attract the investors to invest in the company.

- **Claims on Assets:** Although assets of the company are not kept as security with the preference shareholders, yet their claims on assets are better to the equity share-holders. At the time of liquidation of the company, the capital of preference shareholders will be paid back to them before making payment to equity shareholders.

- **Ploughing Back of Profits**: We have already discussed Equity Shares and Preference Shares as long-term sources of finance. Besides, ploughing back of profits is considered as an important internal source of finance. When a company does not distribute whole of its profits and wishes to reinvest a part of if, it is called ploughing back of Profits or retention of earnings. Because ploughing back of profits generates financial sources, it is called self-financing or internal financing. Retention of earnings is made in the form of various reserves and funds, such as General Reserve, Dividend Equalization Fund etc. Therefore, every year after payment of tax on the income and distribution of a part of it as dividend, the balance is retained in business. Retained earnings can be used to meet both long term and short-term requirements of capital. It is an easy and economical source of finance which can be used for the expansion and modernization of business. These accumulated profits can be used to issue bonus shares. The increase in these accumulated profits increases book value of shares. Besides, a company can follow stable dividend policy due to these accumulated profits and business can save itself from business fluctuations. Debts can be paid easily and the efficiency of company increases. However, retention of profits depends upon the total earnings, dividend policy, tax policy of the government, need for growth, availability of other sources of finance, nature of business of company and the attitude of management etc.

c) Debentures: Debentures are an important source of long-term finance for a company. With the help of this source, company arranges for finance for meeting the requirements of development and modernization after its establishment. The funds acquired by issuing debentures are in the form of loans and its holders are the creditors of company. In general sense, debenture is a written certificate issued by the company, for the acceptance of the debt, under its seal. The Companies Act, 1956 does not explain clearly the meaning of the term debenture. It only states that "Debenture includes debenture stock, bonds and any other securities of a company, whether constituting a charge on the assets of a company or not". Section 2 (12), Indian Companies Act, 1956.

In debentures, the amount of debt, rate of interest and other conditions are mentioned based on which they have been issued and they must be redeemed. Here, it is essential to explain the difference between debenture and bond. In America, the term bond is meant to indicate a document which creates charge on the assets of the company. There debentures are 'meant as unsecured bond which does not create any charge on the assets of the company. At the time of liquidation, debenture holder is treated as general creditor. But in India, there is no difference in debenture and bond. Both are used as synonyms. Recently several financial institutions such as IDBI, IFCI, ICICI and infrastructural companies have issued bonds which are unsecured. But debentures are secured. The Characteristics of Debentures are:

- **Maturity:** Debentures have a maturity date. Date of maturity means the date of repayment of debentures. As per the terms of issue of debentures, the debentures should be redeemed after a fixed period or on a certain date. When the debentures will be redeemed it depends on several factors including the condition of capital and money market at the time of issue of debentures, current rate of interest and goodwill of company. Debenture holders do not want that the company may continue to use their funds for a fairly long period. Rather they want the liquidity and security of their money. If there is great risk, the debenture holders will wish an early payment. The debentures can be redeemable as well as irredeemable. The debentures, for the redemption of which, no date is fixed and are redeemed at the option of the company are irredeemable debentures. In India such debentures are not prevalent.
- **Claims of Income:** The debenture holders have preferential rights on the income of the company. Firstly, the shareholders cannot be paid any dividend without payment of interest to debenture holders. Secondly, the income from interest on debentures to the debenture holders is fixed and must be paid essentially, whether the income of company is more or less than it. If company fails to pay them regular interest, the debenture holders can initiate legal action for liquidation of company.
- **Claims on Assets:** Debenture holders have preferential claim on the assets of the company also as compared to shareholders. Such situation arises in case of liquidation or reorganization of company. In case of liquidation of the company, the debenture holders get their principal and accrued interest before any payment to the shareholders. Normally, the debenture holders have charge against the special assets so that their interests are secured. Such debentures are called secured debentures.
- **Controlling Power:** Debenture holders are the creditors of the company. They do not have any voting rights in the meetings of the company. They cannot participate in the appointment of Board of Directors. But indirectly, they can influence important managerial decisions. For example, they can put a condition to maintain a minimum liquidity ratio or to accumulate fix number of reserves based on their agreement with the company. But in case the

company is paying them interest and principal in time as per contract, they cannot interfere in routine matters of the company.

d) Loans from Financial Institutions: Generally, the companies raise a large portion of their funds by issuing equity shares, preference shares and debentures for the achievement of their objectives including project expansion, modernization, diversification etc. But due to increase in the cost of projects, the industrial units must depend on medium term and long-term loans. For the fulfillment of their requirements for medium term and long-term loans several financial institutions have been established at the state level, national and international levels. In India, the financial institutions established at the national level include Industrial Development Bank of India (IDBI), Industrial Finance Corporation of India (IFCI), Industrial Credit and Investment Corporation of India (ICICI), Industrial Reconstruction Corporation of India, (IRCI), Life Insurance Corporation of India (LIC), General Insurance Corporation (GIC), Unit trust of India (UTI). Besides, at the state level State Financial Corporations (SFCs) and State Industrial Development Corporation (SIDC) have been established. For example, in Haryana, HFC and HSIDC have been established. All these institutions not only provide long term and medium-term loans but also provide technical assistance. Before providing financial assistance, technical, financial and economic aspects of the industrial units are evaluated with the help of experts. The financial institutions provide assistance in the following manner.

- To provide long term and medium-term loans to the industrial units.
- To assist in management at the time of their promotion for expansion and development.
- To provide them technical and financial consultancy at the time of need.
- To subscribe for the shares and debentures issued by the industrial units.
- To take part in underwriting shares and debentures issued to the public.
- To guarantee the loans given by scheduled banks.
- To provide refinancing facility for the loans given by scheduled banks and co-operative societies to the industrial units.
- To guarantee the deferred payments.

e) Public Deposits: Public deposits are an important source of medium term and short-term finance of a company. In India, this is a traditional source of finance. After the third five-year plan, there has been tremendous increase in the public deposits. In India, normally public deposits are accepted for a period of 3 years. From 1-4-87, the maximum rate of interest on public deposits can be 14%. The private sector companies cannot accept a deposit of more than 35% of their paid up capital and free reserves in which share of public can be 25% (maximum) and the balance 10% can be accepted from the shareholders. The public sector companies can get all 35% deposits from the public.

There are many reasons for attraction of companies towards public deposits. The cost of these deposits is less than the rate of interest offered by banks. There is no need to mortgage the assets for public deposits. Moreover, public deposits are available for a longer period than bank loans. For investors also these deposits can be quite useful because the rate of interest offered on these deposits is higher than the bank rate.

f) Lease Financing: Initially, the concept of lease was limited to land only but for the past few years, lease financing is becoming operational in the industrial arena. Lease is a long-term source of business finance. Companies can take necessary business assets on lease rather than buying them. If they purchase these fixed assets, they must pay in full- Contrarily, under lease agreement company gets the right to use the asset after making part payment for it. Under this arrangement, the owner of the asset (lessor) surrenders the right to use the asset in favour of other person (lessee) in consideration of pre-determined rent. After the lease period, whether the asset will be returned to the lessor or it will be retained by the lessee, depends on the terms of lease. Thus, the ownership and the use of assets, in case of lease, lie in different hands. In industrial era, the use of lease financing started after 1980. During this period, the financial needs of the industrial units also increased due to the rise in price level. Banks and other financial institutions were unable to meet these requirements. Banks were overburdened with the credit to the priority sector. With effect from 1987-88, the Government withdrew the investment allowance. Which made the acquisition of equipments on lease to be more useful rather than purchasing them.

2.8.5 Short Term Sources of Finance

The short-term sources of finance can be divided into two parts.

(A) Banking Sources: The banking sources of short-term finance include:

- **Line of Credit:** Under this source, bank determines the maximum limit of credit for their customers. Customer can withdraw money from bank within the limit. The maximum amount of credit is determined based on goodwill of customer, his size of business, financial position and allied factors. Interest must be paid on the amount withdrawn.
- **Overdraft:** In this facility, bank allows the customer to withdraw more amount than his actual deposit in his current account. The excess amount withdrawn is called overdraft. The amount of overdraft is also determined based on financial position of business. The quantum

of overdraft is generally less than the line of credit. Bank honours the cheques of customers within a pre-determined time frame. Interest is charged on the actual amount withdrawn.

- **Secured Loan:** Bank generally grants credit based on security of the current assets like inventory. The assets held as security remain in control of bank. As soon as loan is paid by customer, he is allowed to remove goods from the go down. Under this source, bank grants loan after reserving a fair margin. The amount of loan is transferred to the account of the customer. Interest is charged on the whole amount of loan rather than the actual amount withdrawn.
- **Discounting of Bills:** Customers can discount the bills due on the future date from the bank. The amount of bill after charging discount is transferred to the account of customer. On the date of maturity, branch collects money from the drawee of the bill.

(B) **Non-Banking Sources**: The non-bank sources of short-term finance are:

- **Public Deposits:** Public deposits for a period of one year are short term source of finance. The public deposits for more than one year are included in medium term sources of finance.
- **Short-term Loans:** Short term loans, secured or unsecured can be taken from other parties excepting banks including merchant bankers, finance companies, co-operative societies, relatives etc.
- **Trade Credit:** When the goods are purchased and they are not paid immediately, it acts as short-term source of finance. This period of credit is short and after sometime, we must pay for it. Trader has the benefit of not getting loan from any other source during this period.
- **Advances from Customers:** The manufactures whose products are in great demand, call for a fixed percentage of the value of order to cash as advance from their customers. Goods are delivered after sometime. No interest is paid on this advance.
- **Outstanding Liability:** Sometimes the expenses of business are not paid immediately. The amount is used in business after delaying the payment of these expenses such as taxes, wages, rent etc.

2.9 Self-Check Exercise

1. What is the meaning of capital structure?
2. Write a short-note on capital structure.
3. What is planning in capital structure?
4. What are the determinants of capital structure?
5. What is financing?

6. Write a short-note on sources of finance.

2.10 Summary

At the time of preparing financial plan for the business, not only the capitalisation is determined but the form of financing or type of capital is also decided. In the capital structure decisions, it is determined from which sources and how much finance should be raised. Thus, under the capital structure, we determine the proportion in which capital should be raised from different securities. In this way, capital structure decisions are related to the mutual proportion of the long-term sources of capital. In the long-term sources, we include the owned funds and borrowed funds. Owned funds include share capital and reserve and surplus, whereas in the borrowed funds we include debentures and long-term loans from financial institutions. While determining the capital structure, management should use proper proportion of borrowed funds and owned funds because it affects the cost of capital and total value of firm. Management also must consider several factors. Capital structure should be determined in such a way cost of capital of the firm is minimum and the value of the firm for shareholders is maximum. In our present-day economy, finance is defined as the provision of money at the time when it is required. Every enterprise, whether big, medium or small, needs finance to carry on its operations and to achieve its targets. In fact, finance is so indispensable today that it is rightly said that it is the life blood of an enterprise. Without adequate finances, no enterprise can possibly accomplish its objectives. Adequate finance is necessary for the efficient operation of business. Neither any business can be established nor its development and expansion are possible without adequate finance. It is required to meet both fixed as well as working capital needs. The various sources of raising long term funds include issue of shares, debentures, ploughing back of profits and loans from financial institutions etc. The short-term requirements of funds can be met from commercial banks, trade credit, instalment credit, advances, outstanding expenses etc.

2.11 Glossary

- **Capital structure:** It is the combination of debt and equity used by a company to finance its overall operations and growth. Equity capital arises from ownership shares in a company and claims to its future cash flows and profits.
- **Financing:** It is the process of providing funds for business activities, making purchases, or investing. Financial institutions, such as banks, are in the business of providing capital to businesses, consumers, and investors to help them achieve their goals.

- **Long-term finance:** It can be defined as any financial instrument with maturity exceeding one year (such as bank loans, bonds, leasing and other forms of debt finance), and public and private equity instruments.
- **Medium-term financing:** It usually requires funds to be paid back between one and five years; whilst long-term finance is generally anything that is paid back after five or more years.
- **Short term finance:** It refers to financing needs for a small period normally less than a year. In businesses, it is also known as working capital financing. This type of financing is normally needed because of uneven flow of cash into the business, the seasonal pattern of business, etc.

2.12 Answers to Self-Check Exercise

1. For answer, refer to section 2.2.
2. For answer, refer to section 2.3.
3. For answer, refer to section 2.4.
4. For answer, refer to section 2.6.
5. For answer, refer to section 2.7.
6. For answer, refer to section 2.8.

2.13 Terminal Questions

- What do you mean by capital structure? Discuss its process.
- How you can plan the capital structure for your project? Discuss
- What are the determinants of capital structure? Elaborate.
- What do you understand by financing? Discuss the sources of financing required for project success.

2.14 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
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- Chandra, Prasana: Project Planning Analysis, Financing Implementation and Review. TATA McGraw Hill, New Delhi.
- Patel, Bhavesh M., Project Management, Vikash Publishing House Pvt. Ltd., New Delhi.
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Unit V

Social cost benefit analysis: Meaning and methodology; L & M and UNIDO approach; SCBA in India Project implementation; PERT and CPM. Problem of time and cost overrun, Project implementation practices in India. Project Review/control – Evaluation of Project.

Lesson 1

Social-Cost Benefits Analysis

Structure

1.0 Introduction

The primary goal of all businesses is to get maximum return on investments. Thus, the promoters prefer to assess commercial viability. However, some ventures may not give appealing results for business profitability, so such programs are executed because they have social consequences. These are infrastructure works, including roadway, rail, bridges, and certain other construction works, irrigation, electricity initiatives, etc., that have a major role in socio-economic concerns instead of merely commercial prosperity. Therefore, such initiatives are assessed for the net socio-economic advantages and cost control that is nothing other than the national survey of potential socio-economic costs. So, SCBA, often known as Social Cost-Benefit Analysis in project management, has become a tool for effective financial evaluation. It is an approach to assessing infrastructure investments from a social (or economic) perspective. Get to know more from PMP training, which is the most prominent credential in project planning worldwide.

It is a technique used for determining the value of money, specifically public investments, and it is becoming extremely popular. In addition, it helps in decision-making regarding the numerous parts of the organization and closely related project design programs.

1.1 Learning Objectives

After studying this lesson, students should be able to understand the:

- Concept, meaning, benefits, scope, features, objectives and advantages of SCBA.
- Disadvantages, stages, approaches of SCBA.
- PERT and CPM, Cost overrun and Problem of time in project management.

1.2 Benefits of SCBA in Project Management

Social cost-benefit analysis (SCBA) in project management enables a complete comparison of several project options. This is not merely a financial concern. Even so, an SCBA recognizes non-financial consequences as well. For instance, consider the effects of increased accessibility on the environment, the economy, and other factors. Social cost-benefit analysis helps governments to pursue innovative initiatives that benefit all, not just a selected few. Additionally, it aids in the entire development of an economy by assisting in decision-making that increases job, investment, savings, and consumption, increasing a country's economic activity. Social cost advantages can be used for both investments. Thus, public investment is vital for a developing nation's economic progress.

- **Market Instability:** A private corporation would evaluate a deal based on productivity and relevant market prices. However, the government must consider additional variables. Determining social costs in the event of market inefficiency and when market pricing cannot specify them. These hidden social costs are referred to as shadow prices.

- **Investments & Savings:** A venture that results in increased savings is considered an investment in a market.
- **Income is distributed and redistributed:** The initiative should not lead to revenue accumulation in the control of a few and the distribution of income.
- **Career and Living Standards:** The impact of a program on employment and level of livelihood will also be considered. Therefore, the contract should result in a rise in employment and living standards.
- **Externalities:** Externalities can be detrimental and advantageous to an enterprise. As a result, both impacts must be considered before approving a deal. For example, positive externalities can take the shape of technological advances, while negative externalities might take the form of rapid urbanization and ecological degradation.
- **Subsidy and Taxation:** Taxation and subsidies are treated as expenses and revenue, respectively. However, taxation and subsidy are regarded as transfer payments for social cost-benefit analysis.

1.3 Scope of SCBA

SCBA's purpose is to establish the financial benefits of each venture in perspective of shadow prices because initiatives impact people's savings and investments and the development's impact on the revenue sharing in society. Additionally, it is critical to consider how certain factors like employment and self-sufficiency will be achieved if the strategy is delivered. SCBA can be used to engage both in the public and private sectors.

- **Public investment:** conducting social cost analysis for economic infrastructure development is critical for the developing world. When the national government contributes to shaping that country's economy, it is essential to analyse the development's social impact.
- **Private investment:** Evaluating the social impact of private development initiatives is vital as federal and quasi-government authorities authorize these initiatives.

1.4 Features of Social Cost Benefit Analysis

The features of SCBA are as follows:

- It is alternatively termed Economic Analysis.
- Allocation of resources to various sectors.
- SCBA aids in evaluating individual projects.

- This primarily serves the purpose of public investment.
- It spells out broad national economic objectives.
- SCBA is concerned with tactical decision making within the framework of broad strategic choices defined by planning at the macro level.
- It offers a systematic approach to evaluate investments in projects within the context of the entire society's economy.

1.5 Objectives of Social Cost Benefit Analysis

SCBA aims to appraise the total impact that a project will have on the economy. Accordingly, SCBA focuses on the following objective that a project is expected to fulfil:

- Justification of the use of scarce resources of the economy by the project.
- Contribution of the project to the GDP (Gross Domestic Product) of the economy.
- Contribution of the project in protecting/improving the environmental conditions.
- Contribution of the project to improve the benefits to the poorer sections of society and to reduce the regional imbalances in growth and development.

1.6 Advantages of Social Cost Benefit Analysis

The primary advantages of SCBA over and above those of normal financial analysis are as follows:

- Clarity of assumptions.
- The focus is shifting away from personal and intuitive judgments.
- This technique is applicable to a diverse range of project categories.
- The ability to identify the projects that maximize the welfare of the community.
- To attain the highest benefit, it is important to rank and prioritize limited resources.
- Exposure to the basis for decision-making for projects and the opportunity for public criticism.
- Decentralized decision-making through the opportunity for community involvement and debate.
- The ability to objectively assess and quantify the purpose of projects about community needs.
- We need to acknowledge social costs and benefits, including environmental factors, which decisions often disregard.
- The analysis of social factors allows us to evaluate projects considering factors other than pure financial profit.

1.7 Disadvantages of Social Cost Benefit Analysis

The primary disadvantages, limitations and pitfalls of SCBA are:

- Complexity.
- Overstatement of the value of social benefits.
- Conflict between social welfare and financial justification.
- False accuracy due to the use of money as a yardstick for comparison.
- Difficulty in defining the limit for the assessment of impacts in the community.
- Difficulty in measuring social costs and benefits and converting them into monetary terms.
- Distributional effects are not properly considered, thus resulting in equity matters being overlooked.
- Time and cost associated with research of social issues and the data needed to price them realistically.
- Infinite (immeasurable) values relating to matters such as welfare, environmental quality and human life itself.
- Mistaking of transfers between individuals or groups in the community as costs or benefits attributable to the project.
- The Self-serving nature of the analysis is that it can be manipulated to justify politically attractive projects.
- Double counting of costs or benefits through the inclusion of secondary effects, e.g., increased real estate values caused by travel time savings.
- There are ongoing theoretical debates regarding the mechanics of this method. These include the selection of discount rates, how to handle distributional effects, and the significance of shadow pricing, among other aspects.

1.8 Stages of Social Cost-Benefit Analysis

- **Shadow Pricing:** The first stage in the process of social cost-benefit analysis is to ascertain the shadow price of the inputs as well as the outputs of the product or service that the project purposes to deliver. The shadow price is an estimate for something that we cannot buy or sell in the open market, such as government infrastructure projects. For example, in the case of the construction of a bridge, we cannot put a definite price tag on the bridge because we do not buy or sell it in the open market. Instead, we will put a shadow price on it to assess its construction benefits. This price will help the managers understand the project's benefits and cost. Sometimes this price may prove inaccurate and unreliable. There is no absolute data to back it up, it is based on assumptions, and it may even be subjective in nature.

- **Financial and Social Viability:** Once managers have the shadow pricing in place, they can move ahead to judge the financial and social viability of the project. The managers need to identify and measure the costs and benefits of the project. Every project for society will have a positive impact in the form of social benefits as well as a negative impact in the form of social cost. We can classify the effects of a project into three main categories:
- **Direct Effects:** These are the effects of a project on the direct or immediate users. Managers already know the costs of the project. They can use shadow pricing to measure the benefits to the users of a particular project, such as a road or a highway.
- **Indirect Effects:** Indirect effects are the effects that indirectly affect people from a particular project. For example, the price of real estate may go up if it is located near a proposed highway project. The managers need to ascertain the costs and benefits from the perspective of the indirect effects too.
- **External Effects:** These are again usually in the form of effects of a project on the external environment. It measures the effects due to changes in pollution levels, safety, security, etc., because of a project or otherwise.
- The managers will thoroughly evaluate the above three effects of a project. In case the benefits outnumber the costs, the project is viable and vice-versa.
- **Comparison and Selection:** The managers will then compare various options available in the form of inputs, resources, or similar other projects. They will try to put a monetary tag on every possible factor involved in the project and its alternatives. They will describe or try to quantify the effects to the maximum possible extent in case they are unable to put a price or monetary value to every effect. The decision-makers also consider all the possible uncertainties and risks that can arise out of a project. They then finally make a calculated and informed decision. They will choose the best alternative among the various options that are available.

1.9 Approaches to Social Cost-Benefit Analysis

The following are the two different approaches to social cost-benefit analysis-

1.9.1 UNIDO's Approach: UNIDO stands for United Nations Industrial Development Organization. In this approach, we first assess the financial profitability of a project by measuring it at market prices. Usually, the Net Present Value (NPV) of the project is found. We value the inputs or costs and the output or benefits from the project at market price. However, in the case of projects with social benefits, we will have to determine the net benefits of the project by using the shadow prices of both inputs and outputs. We then calculate the impact of the project on the savings and investment of different income groups. We will adjust this impact to the net present value. The next step is to calculate and adjust the impact of the project on the income distribution. We will calculate the value of the effect that a project creates on the distribution of income between the poor and the rich and between different regions.

There is a possibility that the economic benefits from a project will be more than its social benefits. The result can be vice-versa too. Managers will use an adjustment factor to make up for the difference. Then they will calculate the correct NPV of the project.

1.9.2 L-M Approach: This approach propagates the use of shadow prices to find out the true value of a project to society. "Savings" is the prime yardstick in this approach. We can convert them into investments anytime in the future. This approach makes use of "border" prices or international prices. It is so because of the present era of globalization and international trade. We calculate the shadow prices of wages, the goods we trade, and the non-traded goods too. We then find out the "Accounting rate of return" and use it for discounting social profits. The resulting projects that are mutually compatible with positive present social value are worthy of being undertaken.

1.9.3 PERT and CPM: Project management involves planning, scheduling, and monitoring several aspects of a project to meet defined objectives. PERT and CPM are two project management techniques that exhibit the flow and sequence of project activities. Understanding the characteristics and differences of PERT and CPM can help you adopt the most effective technique for an organization's projects. In this article, we discuss why to learn about PERT vs. CPM project management techniques, explain what a PERT chart is, describe its benefits, explain what a CPM is, discuss its benefits, and explore the key differences between PERT and CPM.

1.9.3.1 Meaning of PERT

PERT is an acronym for program evaluation and review technique. A PERT chart is a visual management tool for tracking and monitoring project tasks and timelines. PERT uses time as a variable that represents performance specifications and resource application. In this technique, you first divide the project into activities to form a sequence. Then, you calculate the time needed to complete each action. This method examines and represents all activities of a project. This is usually to identify the least possible time to complete each task and the minimum time it can take to complete the entire project.

Project managers often use this chart to make realistic schedules by setting estimates for each duration. PERT uses the following three-time estimates to get the expected activity time for planning projects with uncertain activity durations:

- **Optimistic time:** This is the shortest estimated time to complete a project activity. The optimistic time estimate shows the minimum time based on an analysis of the best-case scenario.
- **Most likely time:** This is the completion time with the highest probability. Professionals make this estimate based on the given time duration, assigned resources, productivity levels, project dependencies, and possible interruptions.
- **Pessimistic time:** This is the longest it can take to complete a project activity. It is the maximum project duration based on worst-case scenario analysis.

1.9.3.2 Benefits of PERT

PERT helps identify early starts, late starts, and possible slacks for each project task. Because it focuses on setting time estimates, it provides the probability of completing projects before the predicted date. Here are more benefits of using a PERT chart in project management:

- **Manages project uncertainty:** The major benefit of using the PERT is managing uncertainties in a project. It estimates the time required for each task to get a nearly accurate measure of the project completion time. Using a PERT chart can help project managers see the entire project timeline and recognize various aspects that can improve to minimize the estimated time. PERT uses the three tome estimates to calculate the expected activity time using the following formula:

Expected activity time = (Optimistic time + (4 × Most likely time) + Pessimistic time) / 6

- **Assumes all initiated projects as new:** The PERT chart assumes every project to be new, with no previous templates or data. Managing a project without referencing can allow for more creative ideas to increase project efficiency. The ideas and methods implemented can help in optimizing total project procedures.
- **Improves planning and decision making:** Using a PERT chart can promote the effective presentation of data across various departments. The qualitative and qualitative data collected from all sources can improve your planning and decision-making processes. It can also facilitate effective communication between departments and better coordination of project activities.

1.9.3.3 CPM: The critical path method (CPM) in project management is a technique used to oversee projects where there is a specific time required to complete a project. Project managers use it to determine the critical and non-critical tasks that can help reduce conflicts and achieve desired results. CPM identifies essential activities to ensure no delayed actions can affect the entire project.

When using CPM, managers start by preparing a list of all activities needed to complete a project. Next, you can estimate the time required to complete each activity and determine the dependencies between the activities. You can then define the path as a sequence of activities in a network. CPM typically involves choosing the path that requires the least amount of time and is cost-effective in a project. Many industries use CPM, including software, construction, aerospace, and technology industry.

1.9.3.4 Benefits of CPM

Project managers often use CPM because it gives valuable insight into resource allocation for each project task. It also provides an outline for the long-term coordination and planning of the project according to a specified timeframe. Project planning, scheduling, and controlling are often more effective with a CPM, improving the project's productivity. You can use this technique to compare project expectations with actual progress and confirm project efficiency. Here are more benefits of using CPM in project management:

- **Facilitates enhanced task scheduling:** This technique facilitates task prioritization, giving teams a better strategy for deploying resources effectively. CPM shows where to spend more time, effort, and resources to accomplish project goals quickly. It can help you recognize the actions to complete first to enable you to complete the project faster and indicate the tasks you can delay without affecting the overall project plan. This helps you schedule tasks according to the project's immediate needs, facilitating enhanced task scheduling.
- **Measures project progress efficiently:** CPM network divides large projects into a series of discrete tasks, which can help measure project progress efficiently. You can assess every project activity to ensure you are allocating resources effectively. It also shows how to find additional resources to improve project time or an effective alternative to reduce costs and remain under budget.
- **Helps in cost and budget control:** CPM associates costs and resource allocation with each sub-task. This helps monitor the expenses on every task and ensure they are all within the allocated budget. The technique identifies when a project exceeds the planned budget or experiences delays in the planned schedule and notifies you instantly. This can help you recognize strategies and areas that need changes or adjustments and

address them accordingly. When you allocate budgets to each sub-task rather than for the entire project, it is easier to recognize financial issues or constraints and resolve them effectively. This helps ensure you complete the project within the pre-defined budgetary parameters.

1.9.3.5 Difference between PERT and CPM

- **Technique:** PERT is a project management technique used to measure uncertain activities in a project and focuses on time planning and control. In contrast, CPM is a statistical project management technique that manages the well-defined activities of a project, such as time and cost management.
- **Focus:** PERT focuses on minimizing the time required to complete a project by the designated deadline. In comparison, CPM focuses on a trade-off between cost and time with a significant emphasis on minimizing costs.
- **Evolution:** PERT evolved as a suitable technique for research and development projects, while CPM is best suited for non-research projects like construction.
- Orientation: While PERT is event-oriented because it focuses on time, CPM is often activity-oriented.
- **Model:** PERT uses a probabilistic model, while CPM is a deterministic model.
- **Time estimates:** PERT has three-time estimates and helps make high-precision time estimates. In contrast, CPM has only a onetime estimate and is appropriate for reasonable time estimation.
- **Activities type:** While the PERT technique manages unpredictable activities, the CPM can manage predictable activities effectively.
- **Job nature:** PERT is beneficial for the non-repetitive types of jobs, while CPM involves jobs with a repetitive nature.
- **Crashing concept:** Crashing is a compression technique used in CPM to reduce the project duration and associated costs. In comparison, the crashing concept does not apply to PERT as there is no time certainty.

1.9.4 Cost Overrun

Cost overrun is the act of a company incurring excess expenses outside of the planned budget for a project. This creates a deficit in the project's initial estimates and its final cost. Cost overrun can occur in any industry, but it is prevalent in construction. This is because many variables can affect a project, such as:

- Material costs and availability

- Shipping costs
- Skills gaps
- Project designs
- Labor needs
- Stakeholder changes
- Equipment needs

1.9.4.1 Signs of cost overrun

- Project managers typically want to ensure they have a clear perspective of a project's progress to detect any symptoms of cost overrun. Here are a few signs of potential cost overruns:
- No specific project cost outline from the company
- No backup plan, resulting in overspending
- No system in place to track project costs
- No analysis of similar previous projects and historical information
- Lack of a plan for proper resource usage
- Lack of work breakdown framework or linked expenses to specific responsibilities
- Failure to record project deliverables, resulting in additional features the client may demand later

1.9.4.2 Causes of cost overrun

Cost overrun can occur for many reasons, including:

- **Poor communication:** Communication is important in budget planning because it helps team members understand a project's budgeting needs. Effective communication can mean setting clear expectations for the project, discussing details and potential problems and providing updates as the project progresses. This can help the team understand why cost overrun has occurred. If cost overrun occurs because of a communication error, it is important to update communication methods to ensure the next project does not experience the same challenges. This can involve purchasing better communication tools, hosting weekly progress meetings or using project management software.
- **Leadership challenges:** The administrative and production teams typically depend on effective leadership to guide them through projects and help everyone use efficient production methods. The leadership team also helps control costs by adjusting the project when things like price overrun occur. Leadership challenges in the

administrative or production team can cause projects to miss their budgeting or deadline requirements. Challenges can include communication setbacks, leadership skills gaps or insufficient training. You can identify these challenges by reviewing the leadership team's collective skills. If you find gaps, you can offer training or education to increase their understanding and create a more skilled and cohesive team.

- **Design errors:** A mistake that occurs during the design and planning phase can cause a cost overrun by changing the project's needs while it is in progress. Design errors can include using the wrong materials, assigning the wrong labourers or ordering the wrong equipment for the job. It can also include flaws that affect the integrity of the finished product, often triggering the need for a redesign. You may minimize design errors by upgrading your design software or processes. Project managers can also improve communication between designers or learn new design skills to fill the skills gap.
- **Change orders:** Change orders, or sudden requests for changes to materials or processes, can cause cost overruns. If a project manager, a supervisor or another member of leadership decides that certain materials, processes or methods are not working, they may issue a change order. This can slow down the project, and sometimes it may lead the project to exceed the budget. Change orders can affect larger-scale projects because a substantial change can mean repurchasing thousands of units of materials or paying for extra labour. You can identify incoming changes early by regularly reviewing project requirements and monitoring the project's scope throughout its timeline. This may reduce the change order's impact or allow you to find ways to prevent it.
- **Site management:** The integrity of the work site can influence the budget and overall management of a project. Site management is important because it reinforces safety and quality standards. Project managers should prioritize site management when creating a project plan and budget to ensure proper communication between management, labourers and clients. You can improve site management by recruiting experienced project managers and leaders. You may consider providing a communication platform or meeting software for the team and hosting weekly update meetings. Meeting with project managers and leaders at the beginning and end of each day can also reinforce project parameters and help you monitor progress.

10.9.4.3 Suggestions to prevent cost overrun

Preventing cost overrun requires awareness of a project's requirements and several preventative measures. Here are some strategies for preventing cost overrun:

- **Understand the project's requirements:** It is important for project managers to understand the details of a project's requirements. This includes familiarity with the necessary materials, processes and machinery. To improve your understanding, you can slow down the project planning phase or request a peer review of your plans. Delaying project planning can ensure an accurate understanding of the project's requirements before you make any financial commitments or decisions. If you cannot adjust the planning phase, consider asking professionals in the company or industry to review the plan for accuracy and consistency.
- **Check the vendor's capabilities:** Your project may require third-party vendors to deliver materials, machinery or labour. During the project planning phase, it is important to research the vendor's capabilities before hiring them. Determine if your vendor can realistically provide the materials or labour within your project time frame and budget. It is best to know which vendors can meet your needs before the project starts.
- **Use project management software:** Project management software allows everyone contributing to the project to use one platform. Certain software can allow you to plan budgets and project requirements, including materials and labour. It can also let you set deadlines and communicate with the client and everyone on the project. Project management software can be a low-cost and versatile solution to cost overrun. With it, you can plan projects on a visual platform where everyone can communicate.
- **Monitor the project for accuracy and consistency:** Project managers oversee a project from start to finish and help account for any changes. This means monitoring project requirements and progress throughout the production and completion phases to ensure accuracy, efficiency and quality. It is important to monitor the timeline of the project and account for delays or premature delivery. If a change order occurs, monitor the project after submission to ensure the team meets the new project requirements.
- **Keep the client or stakeholder updated:** Clients or stakeholders have a significant interest in the project and expect a viable, finished product at the end. Make sure to keep them updated on your progress to prevent any delays. If stakeholders feel the company is not meeting their requirements, they can halt the project or request a revision. The more frequently a stakeholder gets updates, the less likely they might be

to make changes. You can keep your stakeholders updated by communicating with them at least once a week.

1.9.5 Problem of Time in Project Management

Time management is an essential skill for a Project Manager. Without it, project performance is likely to be poor such as missed targets, cost overruns, and ineffective use of resources. Some issues likely to impact on effective time management include those discussed below:

- **Not having a carefully prepared project plan:** Project plans, among other things, specify project milestones, which serve as time targets to aim for.
- **Poor estimation of project activities when preparing the schedule:** Time estimates need to be as sound as possible. Sometimes under-estimates are the result of a Project Manager wanting to please a client.
- **Not having all the systems in place from the start that are needed for the project:** Monitoring systems, among other functions, provide data to check that a project is being delivered efficiently.
- **Not taking full advantage of the time savings, and resource flexibilities, available in the project schedule:** Lead times might enable a task to be started earlier, with flow-on benefits for project completion. Taking full advantage of float to schedule non-critical activities at a time to best use resources is a sensible tactic time-efficient tactic.
- **Not having the right people in time-critical roles:** Some project tasks require highly specialised or experienced personnel. Not appointing the right people from the start in critical roles may see activities potentially taking longer than planned as personnel seek advice, or make mistakes that must be rectified.
- **Not identifying the critical path early or monitoring it:** The critical path for a project can change with other project changes (e.g. change of scope, unidentified risks emerging, unforeseen task dependencies and so on).
- **Wasting time at project team meetings:** 'Talkfests' simply waste time. Meetings should have a tight agenda and focused on proactive issues such as problem solving, risk identification, meaningful analyses and relevant progress reports. If an issue does not involve everyone in the room, it is better to have it separately examined by a relevant working group, with results reported back to the project team meeting.
- **Micromanaging team members and project issues:** When a project team is competent, and has been selected carefully, they are best left to do their job. Time spent by a Project Manager in double-checking what competent people are paid to do is time

lost in dealing with more critical project issues. According to the 80/20 rule (or Pareto Principle), the Project Manager should focus on the 20% of the project that will, like most projects, typically return 80% of the benefits.

1.9.6 Self-Check Exercise

1. What do you mean by SCBA?
2. What are the benefits of SCBA?
3. Discuss in brief the scope of SCBA.
4. What are the features of SCBA?
5. Write short-note on SCBA.
6. Write a short-note on UNIDO's approach.
7. Write in brief L-M Approach.
8. What do you mean by PERT and CPM?
9. What is cost overrun?

1.9.7 Summary

Social cost-benefit analysis in project management helps us to undertake viable developmental projects for the welfare of society. Managers can make an informed decision after comparing several options and choosing the best one. The analysis also provides an insight into the social costs or harmful impact of any project, too, and not just the financial or social benefits.

1.9.8 Glossary

- **Social Cost benefit Analysis (SCBA):** It is a methodology used for such evaluation of primarily. public investments. It is a systematic evaluation technique for long-term decision-making in capital projects appraisal.
- **UNIDO approach:** It focuses on providing incentives for public and private sector bodies to more effectively promote cluster development and to build their capacity to do so.
- **LM Approach:** It measures costs and benefits in terms of international prices (border prices). The LM Approach measures costs and benefits in terms of uncommitted social income. Tradable Goods are those goods which are traded.

1.9.9 Answers to Self-Check Exercise

1. For answer, refer to section 1.0.
2. For answer, refer to section 1.2.
3. For answer, refer to section 1.3.
4. For answer, refer to section 1.4.

5. For answer, refer to section 1.5.
6. For answer, refer to section 1.9.1.
7. For answer, refer to section 1.9.2.
8. For answer, refer to section 1.9.3
9. For answer, refer to section 1.9.4.

1.9.10 Terminal Questions

- What do you understand by SCBA? Discuss its benefits, scope and features.
- What are the objectives of SCBA? Discuss
- Describe the advantages and disadvantages of SCBA.
- Discuss the different stages in the process of SCBA.
- Describe the approaches of SCBA with the help of suitable example.
- What do you mean by PERT and CPM? What are their benefits and usage in project management? Discuss
- What do you mean by cost overrun? How its can be prevented? Discuss
- What is the problem of time in project management? Discuss

1.9.11 Suggested Readings

- Rathore, BS and JS Saini, A Handbook of Entrepreneurship (Ed.), Aapga Publications, Panchkula (Haryana)
- Gupta, CB and P Srinivasan, Entrepreneurship Development, Sultan Chand and Sons, New Delhi
- Arya, K. (2016). Entrepreneurship: Creating and Leading an Entrepreneurial Organization. Pearson.
- Hisrich, R. D., Shepherd, D. A. & Peters, M. P. (2016), Entrepreneurship, McGraw- Hill Education.
- Ramachandran, K. (2014). Entrepreneurship Development: Indian cases on Change Agents. Tata McGraw Hill.
- Robinson, P. J. (2017). A Guide for Writing Your Business Plan. Independently published
- Chandra, Prasana: Project Planning Analysis, Financing Implementation and Review. TATA McGraw Hill, New Delhi.
- Patel, Bhavesh M., Project Management, Vikash Publishing House Pvt. Ltd., New Delhi.
- Pitale, R.L. Project Appraisal Techniques, Oxford and IBH.

Lesson 2

Project Implementation and Control

Structure

2.0 Introduction

After the selection of a project, the next task of a project manager is to implement it so that a project on paper can be converted into reality. Project implementation can be explained as a process where project inputs are converted into project outputs as set out in the project framework. The process of implementation involves combination of various activities such as planning, scheduling and controlling with the utilization of resources like men, material, machine, technology, money and time which need to be supervised or monitored so that project can be completed within time limits and cost. Project implementation can be explained as that phase of the project where visions and plans are turned into reality. This is the logical conclusion, which is deciding after evaluating the project thoroughly.

2.1 Learning Objectives

After studying this lesson, students should be able to understand the:

- Concept, meaning, approaches, steps, and factors affecting project implementation.
- Problems in project implementation, suggestions for effective project implantation.

- Evaluation of projects.
- Meaning, scope of project control.

2.2 Meaning and concept of Project Implementation

Project implementation refers to the execution of the project i.e. converting the inputs into outputs. It involves a series of activities which need to be planned, operated and controlled for the utilisation of resources. Project implementation is generally done by the implementing agency. Implementing agency is that institution that initially prepared the project and received funding for it. A project implementation unit set up by implementing agency to carry out the implementation of project on behalf of the implementing agency. If any other institution that participate in the implementation of the project by way of working collaborative relationship, extending some technical collaboration, or involving their staff to assist the project are called as co-operating agency.

Project implementation has two essential elements i.e. project activation and project operation. Project activation is the foundation stage of project implementation and it involves all activities which make the project operational such as establishing project implementation unit, procurement of raw material and equipments, training and development of manpower, recruitment of project manager and other required staff etc. Project operation is the actual management of a project in practical terms. It is related with the development and normal life period of the project. In this process inputs are transformed into outputs following the activities which are laid down in work plan.

2.3 Approaches to project Implementation

- **Top-down approach:** In this approach project implementation done by the outside agencies with minimum involvement of the beneficiaries. All staff members and workers belong to that agency only. They may include Government departments, international development agencies etc. This approach is very helpful for that projects which require quick results.
- **Bottom-up approach:** In this approach project implementation done by the beneficiaries. However, the financial resources and technical assistance can be provided by the outside agencies.
- **Collaborative participatory approach**: In this approach both top to down and bottom-up approaches to project implementation are applied collectively in the implementation process

2.4 Steps of Project Implementation

It is now clear that project implementation is a process that occurs in noticeable stages and there are common elements of successfully implementation programs. The basic steps/ stages of project implementation from which each project have gone through are:

- **Project initiation:** It is a first stage of every project. In this stage initial planning and preparation for project must be done. The purpose of this stage is providing help in the approval for the project proposal, appointment of staff and project manager, and estimation of budget etc.
- **Project blueprint:** The purpose of this stage is to achieve a common understanding of how the organization intends to run its project within the system. Generally, it involves projecting the details of the work and decisions are taken about the tasks to be done and by whom and when they are to be done.
- **Authority and responsibility:** The next step of project implementation is to provide the authority so that responsibility can be assigned. Taking decision as to who is responsible for ensuring that the work gets done, distributing decision making authority among the project team and the existing organizational units and establishing formal lines of communication are some of the key points in this regard.
- **Estimating and arrangement of resources:** This step involves estimation and arrangement of various resources such as manpower, machines, materials, money and time for performing the project activities.
- **Directing and controlling**: This stage involves the activities like motivating the project staff, execution of project activities, and taking corrective measures if there are any difference between set standards and actual performance.
- **Establishment of proper control system**: Establishment of control system involves determining what information is required for the project control, identifying sources of such information and setting up reporting system for the project.
- **Go, live and support:** It is a last stage of the project implementation. It is also called termination of the project. In this stage project manager will hand over the responsibility to the existing staff and prepare the final report. It is a time to move from a project-oriented, pre-production environment to live production operation.

2.5 Factors affecting project implementation

There are numerous factors which affect the implementation of project. Some factors are responsible for the success of project whereas some are responsible for its failure. Factors that lead to the success of projects include its preparation, design, management and government commitment. Factors that lead to failure of projects include financial constraints, technical constraints, institutional constraints and political constraints. Now we will discuss these factors one by one:

a) Factors that lead to success of projects

- **Proper planning and preparation:** Successful project implementation greatly depends upon its proper and careful planning and preparation. Projects need to be implemented after they have been carefully prepared.
- **Simplicity of design**: Projects that have well defined objectives and which are simple to understand along with appropriate technologies have better chances of being implemented successfully.
- **Efficient management**: The success of implementation of project lies in the hands of efficient managers and as such sound project management is a key to project success. Project performance is greatly influenced by quality of management. A competent manger always looks at difficulties as stepping stones and with his capable qualities turns them into opportunities.
- **Government commitment**: Government and government policies play a crucial role for the success of any project. So, for the successful implementation of project government commitment is a pre-requisite. Government commitment is the resuming interest and active support of those agencies as well as individuals to attain the project's objectives. This can be done through the allocation of financial and human resources or through the working of the administrative and political set-up.

b) Factors that lead to failure of project: There are some factors that may lead to failure of the project. These are:

- **Financial constraints:** Finance plays a major role in the success of projects. So, before implementation of project, manager must assure ample resources for generating the funds. Financial constraints include increasing cost due to increase in prices of raw material and wage level, increasing rate of interest on capital, increase in foreign exchange rates etc.
- **Technical constraints:** Technical constraints include lack of technology, low quality material and machinery, technical defects in installation of machines and other equipments, lack of specialized technical advice or consultants etc.
- **Institutional constraints:** These are the main cause of implementation delays and cost overruns of projects. Institutional or Management constraints include inadequate

management information system, interference of bureaucracy in project administration, lack of training and development facilities, high personnel turnovers, incompetent manager etc.

- **Political/Government constraints:** As we all know, for implementation of project, government commitment is a pre-requisite. When government not supports the project or commitment of the government is weak, project implementation almost difficult or impossible.

In addition to these constraints, some other constraints should keep in mind such as delay in allocation of funds for the project, lack of the responsibility and transparency by the project manager, natural calamities, lack of team work etc.

2.6 Problems in project implementation

There are number of problems which are faced by the project manager for implementation of the project. Some of the main problems are discussed as follows:

- **Undefined project objectives:** Generally, there are segregation between the personnel responsible for the formulation and personnel responsible for the implementation of projects. Often a person who implement the project are not clear about the project objectives because of lack of identity, they develop low morale resulting into poor management. Thus, there is a great need of the involvement of the persons associated with the implementation of the projects at same stage of the formulation and appraise them of full implications of the project.
- **More emphasis on technology**: Planning team primarily consists of the technical staff. Technical staff emphasis on technical aspect and ignores managerial aspect. So, it creates a big problem in project implementation. Further planning team always concentrate to deal with short-term issues, and ignore long-term management issues.
- **Scarcity of trained and skilled employees**: Sometimes people associated with the project simulation have neither the required skill nor the aptitude to formulate the project in consonance with the goals of the project. So, it creates hurdle in the implementation of projects.
- **Ineffective monitoring system**: Weakness of controlling mechanism is also a problem in the way of project implementation. Often project is not completed within the budgeted resources and scheduled time. It is a normal feature to extend the life of the project resulting in the wastage of huge resources. Proper monitoring helps the managers to project implementation with in stipulated time.

- **Inadequate supply:** It is the duty of the project manager to ensure the availability of required inputs for the production. It is observed that the project gets delayed because of the timely availability of all the inputs.
- **Faulty procedures:** Without developing proper procedures, most of the project personnel remains engaged in unnecessary reports. These procedures should be clearly understood in the initial stage of project so that no confusion arises later.
- **Faulty manpower planning**: The success of the project greatly depends upon the quality and quantity of the personnel associated with it. Lack of proper human resource planning is a major obstacle in the process of project implementation.
- **Follow-up:** Lack of proper follow up of project is also big obstacle in the successful implementation of project.

2.7 Suggestions for effective project implementation

The following are the suggestions for effective project implementation:

- **Well defined project objectives:** There is a great need of the involvement of the persons associated with the implementation of the projects and the persons associated with the formulation of the project for the successful implementation. Proper guidance may be provided to them about the project and project objectives. This will help in developing a good rapport between the formulators and implementers of the projects.
- **Involvement of management:** For the successful implementation of project, management must play active role in project management than only providing money and other resources required for implementation. Further while forming planning team, members of the managerial team also make a part of the team. Managerial part should not be ignored.
- **Employ trained and skilled workers**: For the successful implementation of project, trained and skilled worker should be employed or before implementing the project it would be better to organize a workshop for providing training to the persons responsible for the project implementation.
- **Effective monitoring system**: Proper monitoring should be done in project implementation. Monitoring if properly designed can help the managers keeping the process of implementation as scheduled. The project performance should be compared at different level of time with the controlled indicators.

- **Adequate supply of inputs:** The project manager should begin the process of procuring the resources immediately after the formulation stage. Because shortage of resources would inflate the cost of project as the other resources would remain idle.
- **Effective manpower planning and procedures for implementation:** Effective manpower planning is a key to success of the project. It is done through proper manpower planning that only needed people are appointed and that they are utilized to increase the overall productivity, efficiency and effectiveness. Further there are set standards of procedures that are to be followed in the project implementation. The procedures are the effective aid to help the efficient functioning of the project.
- **Follow-up plans:** There is a great need to improve the capabilities, perception and attitude of the personnel so that they can take corrective decisions in the ultimate interests of the organization. Controlled management and continued support are necessary for the effective fulfillment of plans.

2.8 Evaluation of Projects

According to A.P. Barnabas "To be most effective, evaluation must not be made merely of physical achievements but also of the cost of such achievements". So careful evaluation is the backbone of all the projects. Evaluation would be futile unless it is carried out in a systematic and coordinated way with clearly defined objectives and consistent procedures applied by the competent valuators. Evaluation can be effective only if there is a well-defined format to secure timely, regular and dependable information on the performance of projects. Effective evaluation would help to ensure that proper design procedure and policies carried out and cost saving would be realized by modifying systems through evaluation before, rather than after implementation. Evaluation would also help to ensure compliance with user community objectives before implementation and it would aid in project management and control throughout the life of the project.

Thus, proper monitoring and controlling of project is compulsory for effective evaluation of project. Monitoring can help managers in keeping the process of implementation as scheduled. The project performance is compared at different intervals of time with the controlled indicators. Whenever deviations are indicated, causes of deviation are examined and solutions are found to correct the deviations. (Rosy Joshi: Project Management)

2.9 Project Control

Control is one of the most important functions of project management. It implies measurement of project performance against the standards and taking corrective actions for deviations to ensure achievement of project goals. The objective of project control is to ensure that everything occurs in conformities with the standards. An unexamined project is not worth for an entrepreneur. Therefore, he must review the performance of the project time to time from different aspects. An efficient and effective control system enables the project manager to achieve the desired results and helps to predict deviations before they occur.

In the words of **Koontz & O'Donell** "Controlling is the measurement & correction of performance activities of subordinates in order to make sure that the enterprise objectives and plans desired to obtain them as being accomplished".

According to ***Theo Haimann,*** "Controlling is the process of checking whether or not proper progress is being made towards the objectives and goals and acting, if necessary, to correct any deviation". Thus, the control process has the following steps:

- Establishment of standard performance.
- Observing actual performance.
- Comparison of actual performance with the standards.
- Taking Corrective action.

Project control is the process of monitoring, evaluating and compared planned results with actual results to determine the progress toward the project cost, schedule and technical performance objectives, as well as the projects strategic fit with the objectives of the organization.

2.10 Scope of Project Control

After launching of the project, control becomes the dominant concern of the project manager. In the initiation stage a project manager must establish the control which involves establishing organization, contracts, schedules budgets, systems and procedures etc and their proper implementation. During next stage, he must control the ongoing activities of the project when it enters the production phase. The primary objective of establishing control is the completion of the project and that too within time, cost and according to specifications. Project control has a direct correlation to project progress and stakeholders' expectations. Based on the above discussions, the scope of the project can be discussed in the following parts:

a) Progress Control: The primary objective of every project manager is to complete the project. The success of the project depends upon timely completion of the project, within the framework of allocated budget and it must perform up to the desired satisfaction. An ideal project is one which is carefully selected and prepared, thoroughly appraised/analysed, closely supervised and consistently evaluated. The basis or progress control should be the control of the tasks which occur at the last level of the work breakdown structure. Completion of one task leads to next level of higher level of work and ultimately the whole project. At each stage the progress of the tasks is measured and controlled. The following are the instruments which are used to control the progress of the project:

- **Preparation of Tasks List:** The first step in controlling the progress of the project is the preparation of a task list. Every employee involved in the project should be asked to prepare a list of tasks involved in their activity. Once the task list is prepared, it is very easy to estimate the total quantum of work and the efforts required to complete that work. The list can then be used for keeping track of what has been completed and what remains to be completed. The objective of preparing tasks list is also to functional control of the project i.e. those tasks which require time and do not have much value should be eliminated. It will reduce the work and cost of the project. A task list also specifies the scope of the work. It must be approved before it is taken up for Implementation. An approved list becomes a work order. If any change is to be made in the work order, it will need the approval and a change order will be required for that. After finalizing the tasks list, it is implemented for progress measurement and control.
- **Measurement of Progress:** Progress measurement is one of the crucial tasks of every project manager for the successful completion of the project. He must measure the progress of the project at every stage to analyse and compare actual performance with the standard. Measurement of individual task is very simple but the problem arises when he must measure the aggregate performance of the tasks which is full of complexities. Therefore, all tasks cannot be measured by the same unit and the different tasks do not have the same milestones. The overall progress of the project can be measured by assigning weightage to each level of task in proportion to its contribution towards the total installed cost. It can further be analysed by giving weightage in proportion to the efforts contributed for the completion of the task. Therefore, for each category of tasks, a list of milestones will be established before the task to measure the progress of the activity.
- **Follow Up:** To ensure the successful implementation of the plans, proper monitoring and follow up of the project activities is required. It will not only expedite the functioning of the project rather help the organisation to make things move. Once the things start moving, they do not necessarily move in the planned way. So, for the timely completion of the project follow up is essential on day-to-day basis. Follow up can be

done through proper information system, reporting, review of the progress and finding reasons for variance in actual and standard performance. It identifies the steps required to accelerate progress and fixes responsibility for taking these steps.

- **Controlling Overall Project Progress:** There must be balanced progress in all stages of a project. There are different phases of the project and the progress of one phase must support the other so that there should be balance in each phase. In the initial stage the balance in progress does not become so obvious, but when the progress of the whole project is viewed, any imbalance in different phases of the project becomes the main issue. Moreover, at the lower level if there is a gap between the actual progress achieved and the progress committed, it can be reviewed and controlled but at higher levels it has no meaning because it becomes uncontrollable. Thus, for progress review at higher levels of management, it is necessary to know what progress is required in a particular phase of a project to keep the project moving at the desired rate of progress.

b) Quality Control: The Quality control is a process using which "an organization seeks to ensure that the product quality is maintained/improved and manufacturing defects/variations are reduced or eliminated". Quality control requires the companies to set up an environment in which both entrepreneur and employees put in the best efforts to achieve perfection. This can be done by providing training to employees, setting up benchmarks, testing/inspecting products to check for variations using statistical quality control tools. Quality control is setting up a framework of well-defined control limits. The control limits help in standardization of production and quality aspects. Quality control is "all about setting standards about how much variation is acceptable". For organizations that have adopted quality control as a continuous improvement process, Statistical Quality Control and Statistical Process Control are commonly used tools. "A quality control approach can be highly effective at preventing defective products from reaching the customer. But at the same time if the defect levels are very high, the company's profitability will suffer and this can only be handled if steps are taken to find out and eliminate the root causes of variations taking place". Quality control can be performed through three tools such as, inspection, quality assurance, and total quality management. These three tools are as follows:

- **Inspection:** Refers to the method that detects quality problems at the end of the production process before they reach the final customer. It emphasizes testing of products to uncover products that do not meet specifications. It is a traditional method that enterprises use to achieve the quality standard. In the enterprise, the inspectors of quality control department check the finished items and reject defective or substandard products. Once the causes of problems are identified, the quality control department tries to change that aspect of production process and procedure to solve the quality problems that occur more often. This control technique has some drawbacks, such as inspection does not add any value to the finished products and services as it is done after the transformation process. Moreover, inspection is an expensive process, in terms of both tangible and intangible costs. For example, materials, labour, time, employee morale, and lost sales.

- **Quality Assurance:** It refers to the method that focuses the efforts on improving quality. It is guided by the belief that "quality comes from improvement of the process not from inspection." In detail, it attempts to improve and stabilize production, and associated processes, so that the issues related to the quality of the product are minimized. A quality assurance process may involve the following:
    - ❖ Testing of previous articles
    - ❖ Planning to improve
    - ❖ Incorporating improvement
    - ❖ Reviewing new item and improvements
    - ❖ Testing of the new item

One quality assurance process involves product evaluation and testing to determine whether they meet standards, such as performance measures. As a result, quality assurance can involve delays in production until all corrective steps have been undertaken. Inspection is treated as one aspect of the overall quality assurance process.

- **Total Quality Management (TQM):** Total Quality Management is an integrated approach adopted by the management with the objective to focus on quality and continuous improvement in all the functional and operational areas of the business. It has been observed that over the time TQM has contributed substantially in improving the overall capability of the business and helped in sustaining the competitive advantage. TQM focuses on improvements from the very basic foundation of the business. It has also been opined that TQM is not an inclusive solution to all the problems of the business and it cannot solve managerial problems. Customer satisfaction is the key driving force of total quality management. TQM is said to be an enhancement of the conventional way of doing business. For better understanding of TQM, let us break it in following way:

**Total* – Total means summation of the whole

**Quality* – Quality is the degree of excellence

**Management* – management is getting things done through others through planning, organizing, controlling, coordinating directing etc.

Thus, product is treated as quality product when it meets certain or all dimensions of the quality. But quality dimensions as applicable to manufacturing cannot not be applied to service sector. Since the products produced by manufacturing organisations are tangible and can be seen, touched and measured directly for example apparels can be touched and quality can be assessed by touching them, similarly in case of cars, computers etc.it is easy to ascertain quality. Therefore, in case of manufacturing organizations, definition of 'quality' mainly stresses upon tangibility as feature of quality. Similarly, it includes conformance which means customers can see whether the product meets the pre-determined standards or not. Performance, reliability, durability and other features can also be easily judged. The degree of perception of quality of each customer varies.

Now, in service organizations, a product is intangible. It cannot be touched or completely seen; it can only be experienced. For example, in case of hospitals, services can be experienced only. Similarly, quality of holiday packages or resorts can be experienced only. These cannot be touched or seen. It is the intangibility of the product, which makes it different from the manufacturing organizations. Since it can be experienced only so the perception of quality is highly subjective. Other than tangibility, some features of quality in service sector includes Courtesy and friendliness of the one who is serving, Promptness in delivery of service, atmosphere where the service is delivered and consistency in delivery of service i.e. every time the same standards are delivered.

c) Schedule Control: A project manager must concentrate on monitoring schedules. Schedule is the process of monitoring status of the project to update the project progress and manage the changes in the schedule. The project manager must control the schedule and make sure that all activities are line up with the schedule baseline. It is the proactive task of the project manager. Schedule control is the regular activity of the project manager throughout the project until all the activities have been completed. Schedule control is concerned with:

- Determining the status of the project,
- Ascertaining factors responsible for the changes,
- Determining the variance in the project schedule, and
- Managing the variance

After calculating the updated schedule and budget, they must be compared with baseline schedule and budget to analyse and compare the actual performance with the budgeted. The variance between the baseline schedule and budget and updated schedule and budget determines that whether the project is going as per schedule or behind the time schedule. This process continues till the end of the project. Thus, schedule control includes the following steps:

- Complete analysis of the schedule to measure the performance of each activity and making analysis to determine the variance.
- Deciding what corrective action should be taken.
- Revising the current plan to incorporate the changes, and
- Revaluation of the schedule after corrective action

The process will be continued till the planned corrective actions do not result in an acceptable schedule. Thus, schedule controlling is a continuous process to measuring the performance of the activities as per schedule baseline. The following are the techniques used to control the schedule:

i) **Variance Analysis:** Variance analysis is a technique to determine the variance in the planned schedule and actual time taken to complete any activity. It compares planning data with actual performance to discover delays or variations in the project schedule. For example, the production process of a project is compared its scheduled start, duration and anticipated completion date with its actual start, duration and completion date to calculate the variance in that activity.

ii) **Progress Reporting:** Progress reporting is a technique to report the timely start and completion of the activities and the remaining duration of unfinished activities. In this technique normally a percentage is used to differentiate between the scheduled time and actual time taken to perform the activity.

iii) **Performance Measurement:** Under this method, the project performance is reviewed and compared with project plan. It assesses the reasons for delay and other deviations in completing any activity of the project. This technique helps the project manager to compare the performance of the activities and determine if corrective or proactive action is needed for the project. It can be done with the help of the following:

- Schedule comparison bar charts
- Project management software
- Schedule change control system
- Schedule Variance, and
- Schedule performance index

iv) Resource Levelling: Resource Levelling is a technique used by the project manager to review the allocation of resources to existing or new tasks. It will normally cause the resources to be levelled to control schedule.

v) Schedule Compression: Under this method the techniques like crashing, fast-tracking etc are used to control the schedule. The objective here is to determine an approach either to reduce the plans duration or to accommodate resource limitations.

d) Cost Control: Cost control is the process of monitoring the cost status of the project and controlling the same. The project manager must monitor and control the budget of the project. The basic objective of controlling cost is that the project must stay within funding limitations. Under this process the project manager finds the variance in budgeted cost and actual cost and make necessary actions to ascertain the reasons for such variance. He must control the factors contributing such variance. He should take appropriate steps to bring the actual cost in line with the budgeted cost either by modifying the future or changing the way to performing the work. For small projects it is easy to analyse the cost for the whole project but as the project becomes larger and more complex, 'cost centres' are to be established at various segments of the project. There are many techniques used to control the cost. Some of these are discussed as below:

- **Project Budgeting:** The term Project Budgeting refers to long term planning for proposed capital expenditure and their financing. It includes both raising of long-term funds as well as their utilization. It is defined as a firm's formal process of investment in capital assets. Project budgeting is the decision-making process by which a firm evaluates the acquisition of its major long term/fixed assets. It involves an enterprise's decision to invest its current resources for addition, disposition, modification and replacement of fixed assets. Thus, Project Budgeting consists in planning the deployment of available capital for the purpose of maximising the long-term profitability of an enterprise. Adhering to the project budget always is the key to the profit from project.
- **Tracking of Costs:** Tracking of costs is another method to control the costs of the project. Keeping track of all actual costs is also equally important as any other technique. At the foremost the project manager must make the budget of all the activities to be undertaken in the project and keep track of the budget in each phase of the project. The actual costs will have to be tracked against the periodic targets that have been set out in the budget. These targets could be on a monthly or weekly basis or even yearly if the project will go on for long.
- **Time Management:** Another technique to control cost is effective time management. This technique is not only useful in cost control but in various management areas. Time

management plays an important role in controlling activities as the delay in completion of any activity will increase the cost of the project. Therefore, the project manager would need to constantly remind his team about the deadlines of the project to ensure that work is completed on time.

o **Earned Value Management:** Earned Value Management is an effective technique for controlling cost. Its strength is that it looks at cost, time, and task completed within the scope of the project simultaneously. It uses a work breakdown structure (WBS) and budget created during the development stage, but tracks these metrics during the implementation stage of the project. This technique is particularly helpful for large project.

o **Forecasting:** Under this technique the project manager not only consider the historical facts but also take into account the future costs and revenues. Forecasting uses techniques for determining new cost values based on the experiences made during the project.

o **Project Performance Reviews:** To check the health of the project, project performance reviews are required. The performance of the project is reviewed with the help of cost and schedule. However, other parameters such as scope, quality and team morale may also be used for this purpose. Project performance reviews use earned value analysis and forecasting to compare cost performance.

2.11 Self-Check Exercise

1. What do you understand by project implementation?
2. What are the approaches to project implementation?
3. Write a short-note on the factors affecting project implementation.
4. What is project control?
5. What is the scope of project control?

2.12 Summary

Project implementation can be explained as a process where project inputs are converted to project outputs as out in the project framework. Project implementation can be explained as that phase of the project where visions and plans are turned into reality. This is the logical conclusion, which is deciding after evaluating the project thoroughly. All projects involve a series of activities such as communicating, training, organization, construction and management. The implementation of project activities converts input to outputs. Outputs are the basic goods and services that the project produces by carrying out the activities. These three levels- inputs, activities and output include resources and actions that a project takes to bring about desired change. The interventions that we design in projects are also composed of these three elements. Interventions are a strategic combination of inputs, activities and outputs.

Outcomes, including effects and impact, represent desired changes the project hopes to bring about. Each project is unique and is aimed at achieving a set of different outcomes.

The purpose of the implementation is to ensure that the project activities are completed as per schedule and within the budget and there are favourable conditions to maintain the desired changes generated by the project after the project as such is terminated. Project implementation steps are repetitive in nature and each project manager will have to adopt the procedures to his own situation depending upon the nature of the project and the organizational structures. There are numerous factors which affect the implementation of project. Some factors are responsible for the success of project whereas some are responsible for its failure. Factors that lead to the success of projects include its preparation, design, management and government commitment. Factors that lead to failure of projects include financial constraints, technical constraints, institutional constraints and political constraints. At last, all the projects undertaken need to be evaluated for the results they have achieved or failed to achieve. Project control is the process of monitoring, evaluating and compared planned results with actual results to determine the progress toward the project cost, schedule and technical performance objectives, as well as the projects strategic fit with the objectives of the organization. It becomes the dominant concern of the project manager. The primary objective of establishing control is the completion of the project and that too within time, cost and according to specifications. The success of the project depends upon timely completion of the project, within the framework of allocated budget and it must perform up to the desired satisfaction. An ideal project is one which is carefully selected and prepared, thoroughly appraised/analysed, closely supervised and consistently evaluated.

2.13 Glossary

- **Project Control:** Project control is the process of monitoring, evaluating and compared planned results with actual results to determine the progress toward the project cost, schedule and technical performance objectives, as well as the projects strategic fit with the objectives of the organization.
- **Quality Control:** The Quality control is a process using which "an organization seeks to ensure that the product quality is maintained/improved and manufacturing defects/variations are reduced or eliminated". Quality control requires the companies to set up an environment in which both entrepreneur and employees put in the best efforts to achieve perfection.

- **Total Quality Management (TQM):** Total Quality Management is an integrated approach adopted by the management with the objective to focus on quality and continuous improvement in all the functional and operational areas of the business.
- **Schedule Control:** Schedule is the process of monitoring status of the project to update the project progress and manage the changes in the schedule.

2.14 Answers to Self-Check Exercise

1. For answer, refer to section 2.2.
2. For answer, refer to section 2.3.
3. For answer, refer to section 2.5.
4. For answer, refer to section 2.9.
5. For answer, refer to section 2.10.

2.15 Terminal Questions

- What do you mean by project implementation? Discuss its meaning and concept.
- Describe the approaches of project implementation.
- Discuss the factors affecting project implementation.
- How you can make project implementation effective? Describe
- What is project control? Discuss its scope.

2.16 Suggested Readings

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