UNIT 21 PROJECT FORMULATION AND APPRAISAL

Structure

21.0 OBJECTIVES

.After reading this Unit you will be able to:

- understand the Concept of a Project,
- know how to Search and Screen Project Ideas,
- learn how to formulate a Project, and
- understand how Projects are appraised by Financial Institutions.

21.1 INTRODUCTION

You have been familiarized with financial statement and their analysis in **Units 18, 19 and 20.** All these Units deal with business organizations which have already come into existence and have commenced their operations. In this Unit, we shall deal with the dynamics of the establishment of a business organization based on the availability of **business opportunities.** In **Unit 2, Block-1** we had discussed certain issues related to Entrepreneurship. This Unit provides further details in this regard. It starts with the search for project ideas and the screening of these ideas. It also deals with the process of project formulation taking into account the various aspects related to it.

21.2 SEARCH FOR PROJECT IDEAS

A Project refers to an investment opportunity which can be analysed and appraised independently. **It refers to a series of activities whose goal is to bring into existence, a business organisation based on a viable economic opportunity within an established cost and time framework.**

The basic characteristics of a Project are:

- It involves a **Current Capital Investment,**
- It ensures a **yield of benefits** in the future,
- It has a **specific life span,** and

- It calls for team work, the members of the team being drawn from various disciplines of Management.

For example a Company may take up a Project for the construction of a Motel in a Tourist Resort. It may involve an investment of **Rs.50 lakhs.** The Company expects to earn a return of **Rs.8 lakhs** after-tax per annum for the next 15 years from Restaurant Sales and Rentals of Rooms. The completion of the Project requires the coordination of Engineering, Marketing and Financial experts.

An entrepreneur has a vast choice of investment opportunities. The ability to identify an **Investment Opportunity** which can be converted into a viable business proposition (after careful and systematic consideration) ensures entreprenuerial success.

There are a number of sources from which an entrepreneur can gain knowledge about Project **Ideas** (Also see **Unit** 2). Any decision to embark on a Project after considering only the obvious or immediately available opportunities may lead to a Lost Opportunity. It would be advisable to scout for new ideas from these sources:

a) A study of the performance of existing units in an industry with particular reference to profitability of units and capacity utilisation would allow an entrepreneur to identify relatively risk-free opportunities.

   For example: If a majority of the hotels in a town enjoy a 80% occupancy rate, it indicates that there is still a need for lodging facilities.

b) A study of projects being **encouraged** by financial institutions ensures that the areas of these projects **are deemed** highly viable. This is because the financial institutions back projects after careful and thorough analysis.

c) A study of economic trends and consumption patterns of individuals will help in the identification of Project Ideas.

   For example: The increasing affluence of the middle class and larger expenditure on tourism, travel and leisure indicates a vast potential for Travel Agencies.

d) An enquiry into Social and Cultural Trends may provide valuable insights.

   For example: The search for an Indian Identity has caused a boom in the sales of ethnic fashionwear in India.

e) An enquiry into business practices in foreign Countries may also provide valuable clues for business opportunities.

   For example: Adventure sports as a part of Tourism has been essentially borrowed from foreign Countries.

f) An investigation into locally available resources and, raw materials and skills may indicate the availability of business **opportunities**.

   For example: The Kondapalli Toys made in Kondapally, **Andhra** Pradesh enjoy a world wide market and opportunities still exist for their marketing within the country.

g) A study of developments in Technology may also provide new product ideas. Often, new technologies allow a better utilisation of locally available raw materials as witnessed in the Coir Industry.

h) A constant search for **unfulfilled** needs of the market allows identification of a series of business opportunities. The development of any **product/** service which satisfies a human need earlier not catered to ensures a steady market. This phenomenon can be aborved in the quick success of Fast Foods, Pre- School Nurseries and labour saving devices in the kitchen.

In a country like India where the Government plays a positive role in the economic development of the nation as a regulatory and promotional agency, the policies of the Government must be taken into consideration whiie **scounting** for new ideas.

Quite often, the plans of the Government provide new business opportunities for the alert entrepreneur. Various incentives given to Small Scale Industries, Units set up in backward regions, tax exemptions to specific products, etc. create new business opportunities. The scheme of export incentives, introduced by the Government of India has lead a boom in the sales of Garment Industries, Leather Industries and Handicraft Industries.

213 SCREENING OF PROJECT IDEAS

In the preceding stage, the primary objective was to ensure that no worthwhile idea would be ignored by the entrepreneur. However, the conversion of a basic idea into a viable project requires rigorous analysis and detailed planning. It would be impossible for us to submit a large number of proposals to such an exercise. Hence, the need arises for a **Preliminary Screening of Ideas** to eliminate Project ideas which are not prima facie promising. The following factors may be used as **Screening Devices** to eliminate such alternatives:

a) **Organisation Strengths and Weaknesses** : Project ideas **must** be **compatible with the organisation. A** Project idea which falls in the area of an organisation's strength can be converted into an effective Project. A Project idea, however profitable basically, which falls in the area of a company's weaknesses cannot be converted into a successful Project.

b) **Adequate Market :** Every Business Organisation requires a minimum level of business (**break** even point) to be viable. Where the market is restricted and cannot allow the organisation to reach the break even point in the near future, the prospects of success are rather limited.

c) **Availability of Infrastructure** : No business venture can succeed in the absence of basic support / services like transportation, electricity, water supply etc. In most of the cases, the business organisation cannot create these services independently. The absence of these facilities would doom the project from inception.

d) **Availability of Essential Inputs and Labour** : The entrepreneur must consider whether there is a regular and assured supply of essential inputs and labour to ensure regularity of operations essential for success of the venture.

e) **Cost Constraints:** If the estimated cost of producing the product/service is comparatively very high in view of factors like high material costs or labour costs or any related reasons, the Project idea should be eliminated.

f) **Risk Consideration** : Risk levels associated with various projects differ on the basis of factors like changes in technology, changes in fashion, and vulnerability to trade cycles. Only well established and cash - rich organisations can undertake such projects.

21.4 FORMULATION OF THE PROJECT: PROJECT REPORT

Formulation of a Project generally culminates in the preparation of a **Project Report. A Project Report is a document setting out in detail the nature of the activity proposed and the justification for Selection and Commitment of resources (men, materials, money) to the activity.**

Genrally the following are the contents of a **Project Report:**

1) Details of the organisation promoting the Project.

2) Promoters and their Track Record with specific emphasis on their experience with the activity selected for the Project.

3) Particulars of the Project with specific reference to:

   a) Technology and Technical Arrangements.

   b) Location and Land & Buildings.

   c) Plant and Machinery.

d) Raw Materials.

e) Utilities like **Power,** Water Supply, Transportation, etc.

f) Labour.

g) Schedule of Implementation.

h) Cost of the Ptoject.

i) Means of Financing.

j) Marketing and Selling Arrangements.

k) Profitability and Cash Flow.

l) Economic Considerations.

m) Government Consent.

n) Declaration of the Promoter.

A well prepared Project Report ensures that every aspect of the Project is well considered. It allows the promoter to embark on the Project with total confidence. In addition, Financial Institutions appraise the viability of a project, primarily on the basis of the Project Report. For preparing a Project Report any of the following options can be adopted:

i) Where the **organisation** promoting the Project is well- versed with **all** aspects of the Project, it may get **the** Project Report prepared by its own employees. However, Financial Institutions insist on the services of Specialists like Chartered Accountants in the preparation of certain aspects of the Project Report.

ii) The organisation may hire the services of Professional Consultants or **Consultancy** Firms for the preparation of Project Reports.

iii) The organisation may primarily depend on Project Reports prepared by Financial Institutions/Professional Institutions. They may make suitable **modifications/** alterations in the Project Reports depending on local conditions and **circumstances.**

Some of the contents of the Project Report do not require any special explanation. The subsequent Sections of this Unit will **deal with** the more important areas in the Project Report in the form of Feasibility Studies.

Check Your Progress-1

1) **How would** you scout for new ideas?

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2) What all should a Project Report **contain?**

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21.5 TECHNICAL FEASIBILITY

Technical Feasibility studies are aimed at ensuring that all the physical facilities required for successful implementation of the project are available and the best of the alternative facilities are selected for the Project. For this importance is given to:

- **Proper location of the enterprise,**
- **Selection of appropriate Technology, Plant & Machinery,**
- **Availability of Raw Materials, Resources** and other **Inputs,**
- **Establishing the Schedule of Project Implementation.**

i) **Proper location of the enterprise** is a **sine qua non** for success. The world **Location** refers to the general location of the enterprise, whereas the world Site refers to a specific area within the location. Every individual project has its own requirements but some of the important factors that must be kept in mind while selecting the **Location/Site** are:

- The **availability** of land, the cost of land and presence of approach roads.
- The proximity to Markets.
- The availability of transportation & communication facilities.

For example: Let us take the example of a Water Sports Complex being planned whose target market is foreign tourists. The location of such a venture must be close to or easily accessible from an airport.

- The easy availability of utilities like Water, Power, Fuel, etc.
- The presence of other enterprises which would form effective backward linkages and forward **linkages.**

For example : The establishment of a five star Hotel would provide an opportunity for opening a Handicrafts Emporium within the complex.

- The suitability of Soil to the proposed Project.

ii) **Selection of Appropriate Technology, Plant & Machinery** ensure efficient and economical operations. Technology must be chosen based on the specific requirements of the enterprise. A very important decision in the area of Plant and Machinery refers to the size or capacity of the facilities to be created. This decision must be taken **after a** careful consideration of demand and fluctuations in demand.

Example: An organisation conducting Sight Seeing Tours must chose between 12 seater buses or 36 seater buses depending on the expected flow of tourists in both peak and lean seasons. Similarly where the tour covers hilly areas, it has to select Petrol based vehicles even though Diesel Vehicles are more economical, in view of certain technical constraints. Importance must also be given to consideration of **Product/Service** mix while selecting technology and plant.

Similarly, a tourist hotel providing only Air Conditioned rooms can opt for Central Air Conditioning, whereas a hotel providing both **A/c** and **non A/c** rooms **must** select Room-Air Conditioners.

iii) **Availability of Raw Materials and Other Inputs** is essential for successful implementation of the project. The requirement of various inputs like raw materials and labour must be estimated on the basis of estimated turnover. **The availability of inputs of the right quantity and the right quality on a regular and continuous basis is essential for continuity of operations.** Wherever necessary, the enterprise must enter into **supply contracts** to ensure availability of essential inputs. The enterprise may also create its own sources of supply.

iv) **Establishing the Schedule of Project Implementation** ensures that the Project is completed within the planned time and commences commercial production on schedule. Delays in the implementation of Project quite often create **Cost Over-Runs** and may effect the profitability of the enterprise. In **the** case of large and complex project,

Advanced Scheduling Techniques like **Programme Evaluation and Review Technique** (PERT) are **utilised.**

In view of the **increasing environmental concern** and Governmental regulations in this regard, the technical feasibility study **must also outline the systems for safe and non-polluting disposal of effluents like solid and liquid wastes. Use of non-conventional energy resources like renewable energy from Sun, Windmills, etc. must also be taken account of.**

21.6 MARKETING FEASIBILITY

Marketing is the corner stone for the success of any business activity. It is rightly pointed **out** that marketing is the source of revenue for any organisation. ***All*** other activities involve only expenditure. Marketing Feasibility studies attempt to determine the size of the market for any **product/service** and its value in terms of revenue- generation. The following aspects form part of Marketing **Feasibility** Studies.

Definition of the Target Market : The target market refers to the identifiable set of individuals (market segment) whose needs are attempted to be satisfied by the **product/service** of the organisation.

Marketing Segmentation helps an entrepreneur to select **his/her** target market and accordingly produce the products or services to satisfy the needs of that segment.

Determination of Market Share : Entrepreneurs **must** try to estimate the demand for their **product/service.** This *can* be done by :

a) Estimating the total demand for the productlservice.

b) Estimating the market share of the organisation.

Techniques for Demand Forecasting : Any **organisation** which intends to estimate the present and future demand *can* depend either **on** Primary Data or Secondary Data.

Primary Data refers to data generated by the organisation intending to use it for a specific purpose. Such data can be generated through various techniques.

The following is a study of important techniques:

a) **Market Surveys** : Market Surveys gather information regarding the practices or intentions of the target market group. Generally, **a sample** is selected from the target group and their views are gathered through a **Questionnaire** or a Schedule consisting of a series of questions. For example, an organisation planning a Package Tour for Bank employees may be faced with the problems of deciding the length of the package tour and sites to be covered in the Package Tour. It can select a sample of **100** Bank employees and gather their views on the above subject.

b) **Expert Opinion** : It is possible to gather relevant information from various individuals/organisations who have good contacts with the target market. For example, in designing a Package Tour, an organisation can learn about target market needs by **consulting** Tourist Guides, Tour Operators, Tourist Home employees, etc.

c) **Trend Analysis** : An analysis of past information allows us to identify the major trends in demand. This information can be projected into the future to estimate probable demand. For example, the tourist traffic to a particular hill resort has been growing at 20% per annum over the last five years. If the present years traffic is 20,000 we can forecast future demand with a reasonable degree of accuracy.

d) **Correlation Analysis** : Correlation Analysis tries to identify relationships between two or more variables. Where one of the variables is known, we can estimate the behaviour of the other variable. For example, tourism expenditure is correlated to per-capita income of citizens of a country. If we can obtain data regarding per-capita income projections, we can also project the future expenditure on tourism.

Secondary data refers to data collected by agencies other than the **organisations** intending to use the data. In many cases, it provides the base from which we **can** develop primary information.

Generally, a judicious **combination** of both primary data and secondary data forms the basis for Demand Forecasting.

Marketing share can be estimated by studying the marketing practices of competitors and comparative evaluation of the organisation's marketing package. This requires the establishment **of:**

- Price of **Product/Service,**
- Distribution policy to be pursued, and
- Sales Promotion Practices.

The Price of the **Product/Service** is always fixed taking into consideration the prices of the competitors. An organisation may charge a price higher than the competitors. Such a strategy is called **Skimming Strategy.** The objective is to establish the **product/service** as a **Premium Product.** On the other hand, the organisation may follow **Penetration Strategy.** In such a case, the organisation charges a price lower than the competitors to attract the price-conscious ccstomers.

Distribution policy of the organisation effects the marketing policies and practices. Organisations may prefer an extensive strategy where the attempt is to make the **product/service** available through a large number of intermediaries. On the other **hand,** organisations may opt for distribution through restricted number of intermediaries.

Lastly, the organisation must determine its Advertising and Sales Promotion Policy. The Sales Promotion efforts of an **organisation** include Media Advertising, Personal selling, Discount and Bargain offer, Tie-ups and other such techniques.

Check Your Progress-2

1) **Discuss** the importance of technical feasibility.

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2) Why should you assess the market feasibility while making a Project Report?

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21.7 FINANCIAL FEASIBILITY

Financial Feasibility studies aim to ensure the entrepreneur that:

- The Project can meet the burden of servicing the debt i.e., the project can ensure sufficient revenues to pay the interest cost of borrowed funds and meet the schedules for repayment of loans.
- The Project can earn sufficient revenues to satisfythe expectation of the owners of the promoting organisation.

It covers the following important aspects:

- Project Cost Determination,
- Sources of Finance,
- Profitability Estimates,
- Cash Flow Estimates,
- Projected Financial Position and Flows.

21.7.1 Project Cost Determination

A proper determination of the cost of project is essential for determining the viability and profitability of the project. The entrepreneur generally approaches Financial Institutions for loans on the basis of the Cost of Project estimates. If there is any Cost-Overrun, the entrepreneur will find it difficult to raise the extra funds required for completion of the project. This again would lead to a time-overrun on the project affecting all estimates of funds flow. Hence, there is a need for proper determination of Cost of Capital.

The following are the essential elements of Project Cost :

a) Land and Site Development : The cost under this head includes the purchase price of land, registration and, legal expenses required for scrutiny of title and registration. In addition, the costs of levelling the land, laying internal and approach roads and fencing of the land are also included.

b) Buildings and Civil Works : The costs under this head include cost of primary buildings for carrying on the activity and auxiliary buildings providing support service. Buildings required for administration of the organisation and marketing activities must also be included. Provision must be made for expenses on Staff Quarters, Garages, installation of Sewerage & drainage systems, etc. Architect's fees is also included.

c) Plant and Machinery : The major components of cost under this head include the Invoice Price of Machinery, cost of Installation and provision for machinery stores and spares.

d) Technical Know-how Fees : Technical know-how fees or engineering fees for acquisition of technology from any Indian collaborator/foreign collaborator is shown under this head. Any expenses on training of staff in foreign countries or remuneration paid to foreign technicians working as consultants is to be included.

e) Miscellaneous Fixed Assets: Miscellaneous assets include:

i) Furniture,

ii) Office equipment,

iii) Cars & Trucks,

iv) Power equipment

v) Air conditioning system,

vi) Fire-fighting Systems,

vii) Pollution control systems and other such systems.

An exhaustive schedule of such fixed assets must be prepared and their prices ascertained for estimation of the cost.

f) **Preliminary and Capital Issue Expenses** : Preliminary expenses include all enquiries incurred till the commencement of commercial operations and includes items like Interest on **Terms Loans** during construction period.

g) **Provision for Contingencies**: This amount represents a provision to meet any increase in the cost of a project on account of factors like increase in the price of equipment, escalation clauses in contracts for Civil Works, increase in taxes, fluctuations in foreign exchange rates and such other factors which cannot be ascertained with precision.

h) . **Margin Money for Working Capital** : **Working** Capital refers to the amount of funds required to ensure a steady level of operations. Commercial banks finance working capital requirements. The entrepreneur is expected to contribute his or her own funds to meet a part of the **Working** Capital in the form of margin. Usually this margin in expressed as a percentage of current assets forming part of **working** capital. The Margin on the Working Capital so estimated is added to the Cost of the project.

21.7.2 Sources of Finance

The cost of Project indicates the quantum of long-term finances needed by the **organisation** to implement the project.

The need for such funds is met out of:

- Equity Capital and Preference Capital, and
- Borrowed Funds

Equity Capital refers to the capital contributed by **equity** share holders of the organisation in case of a company. The equity share holder is paid a dividend on capital subject to the availability of adequate profits during any financial year. It does not involve any fmed charge as in the case of Interest on loans which has to be paid irrespective of the **availability** of profits. Equity capital is repayable to share holders only at the time of liquidation of the company.

Preference Capital is the capital contributed by preference share holders who enjoy a preference over the equity share holders in the **i)** payment of dividends and ii) Repayment of Capital at the time of liquidation. There are various classes of preference shares like Redeemable Preference Shares, Cumulative Preference Share, **Participating Preference** Shares, Convertible Preference Shares etc.

Both these sources represent the own sources of the organisation in the case of companies. In case of Partnership firms and Sole traders the Capital brought into the **firm** by the owners out of their resources represents Own Capital.

Borrowed Funds: In addition to their own funds Promoters borrow funds from various sources to met the cost of the Project. Generally, borrowed funds involve a fmed charge on the **organisation** in the form of interest. The cost of the **project** is met out of Long Term Borrowings. The word Long Term Borrowings refers to any loan amount which is not repayable **within** one financial year. Such long term borrowings are repayable in installments payable on a quarterly basis spread over 2-7 financial years. The following are the primary sources of long-term borrowings.

Debentures : Debentures are instruments acknowledging a debt issued by the Company in multiples of **Rs.10/- .** They carry a fmed rate of interest payable to debenture holders. Generally, debentures are secured by a charge on the assets of the Company.

Public Deposits: Public Deposits refer to Fixed Deposits issued by companies to the general public. Generally, they are not secured by any charge on the assets of the company.

Term Loans : Term Loans are extended to organisations by term-lending institutions like IDBI, IFCI, ICICI, UTI, GIC & Commercial term-lending institutions in the form of State Financial Corporations and State Development Corporations. These term-loans are generally repayable over a period of 5- 10 years, and carry a **fixed** rate of interest.

Lease Finance: Promoters can enter into a lease agreement with a Lease-Finance Company. The asset required by the promoters is given by the leasing company for a fixed period during which the organisation using the assets must pay lease-rentals.

Deferred Credits : Suppliers of Capital Equipment provide deferred credit facility to equipment purchasers. The price of the assets can be paid in installments spread over a period of 3 to 7 years. In such cases, the supplying company generally insists on a guarantee from a commercial bank for payment of installments.

Capital Subsidies/Development Loans : Capital Subsidies are provided to projects which are started in notified backward areas. The Government provides Subsidy, calculated as a given percentage of the Cost of the Project.

Plough Back of Profits : Profits of a company can either be distributed to Shareholders in the form of dividends or reinvested in the organisation. Such ploughing back of profits adds to the financial strength of the organisation.

21.73 Profitability Estimates:

Profitability estimates are estimates of expected sales revenues and costs related to the expected revenue. They determine the financial viability of the project in the long run. They are prepared for a period sufficient for repayment of the term loans required for the project. Profit is represented by the excess of Sales revenue over the costs needed to generate the estimated Sales.

The following are the important aspects to which the entrepreneur must pay attention:

Sales Revenue: The volume of sales must be projected taking into consideration the capacity of the project and market demand. A correct estimate of capacity utilization is the key to success in Sales Projection. Usually a lower rate of capacity utilization is assumed during the early phases of the project as many bottlenecks may be encountered. The next step consists of estimating the sale price per unit. Pricing practices and policies of the competitors must be taken into consideration while fixing the sale price. Sales revenue can be ascertained by multiplying the sales volume with the sale price.

Where sales revenue is subject to taxes like sales tax, sales revenue must be projected both inclusive of tax and net of taxes.

Costs: Costs can be broadly classified into Direct Costs and Indirect costs. Direct costs are those costs which vary proportionate to the level of activity. Indirect Costs are those Costs which remain fixed within a range irrespective of the level of activity (See Unit 14). The following are the important aspects to be considered in projection of expenses:

i) ,Direct Costs - Tbese include:

a) **Raw material costs:** Raw material requirements in volume can be projected on the basis of expected sales volume based on Input and Output-Ratio. The input-Output ratio can be determined by a study of existing units, consultation with experts etc. The next step is to ascertain the price of raw materials at present and estimation of future price based on future demand and supply projection. In addition, the costs on transportation of materials and handling charges etc., must be built into the final price of materials.

b) **Wages:** Wages refer to the remuneration paid to workers directly involved in the Production/Service activity. The extend of requirement of labour is a function of activity levels. Labour prices can be ascertained by a study of Industry Practices. Normally, a 10% increase is provided in wage rate to accommodate annual increment and compensation for inflation.

c) **Utilities:** This element includes the expenses on power, fuel etc. Requirements of these utilities can be projected on the basis of activity levels using technical estimates. Tariffs can be ascertained by industry experience.

ii) Indirect Costs - These include:

a) Salaries: Salaries of employees associated with the supervision of production, administration and marketing of the product/service constitute a major head of expenses. The work Salaries is used to indicate remuneration paid to employees not directly involved with the production activity.

b) Rents, Insurance and Taxes: Rent paid for hire of the premises can be estimated on the basis of plinth area required for the organization and location of the organization. Insurance Premiums on various assets can be estimated on the basis of asset values forming part of Project Costs. Tax payment can be projected on the basis of Government taxation structure.

c) Repairs and Maintenance: Repairs and Maintenance charges on various assets can be projected as a percentage of asset value, It must be remembered that the provision for repairs and maintenance increases with the passage of time.

d) Depreciation: Depreciation on all fixed assets must be estimated based on the expected wear and tear of assets. However, the entrepreneur must give importance to the statutory requirements regarding depreciation laid down in the Companies act, 1956 and Income Tax act, 1961.

e) Interest Costs: Interests on term-loans can be ascertained with reference to the rate of ,interest charged by the financial institutions. It must be remembered that interest burden diminishes on account of repayment of term- loan at periodic intervals.

f) Other Administrative Expenses: These include Costs of Stationery, legal expenses, auditor's fees, directors fees and other such miscellaneous expenditure.

g) Selling Expenses: Selling Expenses are expenses incurred on promotion of the product/service. They include expenses on media advertising, salesmen's salaries and commissions, cost of free samples etc. Generally selling expenses are calculated as a percentage of sales revenue. The marketing strategy of the organization must be taken into consideration while determining the level of selling expenses.

h) Profits: The excess of sales income over expenses represents the pre-tax profits. After tax, profits can be calculated by reference to the rates of Income tax applicable to the project level of profits. After tax, profits are (i) either paid out to shareholders in the form of dividends or (ii) retained within the organization in the form of reserves. The actual profits from operations may be different from the projected figures made in the Project Report. However, if proper assumptions are made in the process of projection;, the variances can be minimized.

Illustration - 1: RST Tours (P) Ltd., has a proposal for running daily sightseeing tours in your city. The following information is available for preparation of Profitability estimates:

No. of 30 Seater Buses in the fleet	4 in the first 2 years, 6 in the next 4 years.
No. of days of operation in a year	300 days
Expected Capacity utilization	80% utilization in peak season (150 days) 40% utilization in lean season (150 days)
Passenger fare per head	Rs. 125/- during the first two years. Rs. 150/- during the next four years.
Tax per passenger	Rs. 5/- per passenger during first two years Rs. 8/- per passenger during next four years.

Direct Costs:

Length of the daily sight seeing tour	100 Kilo Meters
Consumption of Diesel	1 Liter for every 5 Kms.
Expected price of Diesel	Rs. 8/- during the first two years. Rs. 12/- during the next four years.
Wages of Drivers	Rs. 120/- per trip during the first two years. Rs. 1501- per trip during the next four years.
Payment to Tourist Guides	Rs. 1001- per tour during the first two years. Rs. 1501- per tour during the next four years.

Indirect Expenses:

Price of a 30 seater bus	Rs. 10 lakhs per bus for present purchase (4 buses) Rs. 15 lakhs per bus for subsequent purchase(2 buses)
Depreciation	15 percent per annum on straight line basis
Repairs and Maintenance	5 percent of value per annum during first two years. 6 percent of value per annum during next four years.
Insurance Premium	2% on original price of the buses.
Annual Garage rents and Salaries of	Rs. 1.20 lakhs per Maintenance personnel annum for first two years. Rs. 2.00 lakhs per annum for next four years.
Administration Expenses	Rs. 60,000 per annum during first two years. Rs. 1,00,000 per annum during next four years.
Selling Expenses	The Company has entered into a contract with Media Consultants for Sales Promotion. The amount is Rs. 1,20,000 per annum.

Term-Loans are expected to cover 75% of the cost of vehicles and are repayable in 10 equal annual installments. The rate of interest charged by the financial institution is 15% per annum on outstanding loan.

Working Capital requirement is expected to be Rs. 10 lakhs during the first two years and Rs. 15 lakhs for next four years. XYZ Bank is willing to finance 80% of the requirement. Rate of Interest Charged is 20% per annum. If you are asked to Prepare Profitability Estimates for the first six years of operation the results would be as mentioned in Table-1.

Table-1
Profitability Estimates for Raj Tours (P) Limited
for First Six Years
(Rupees in Lakhs)

Heads of Income & Expenditure	Years					
	1	2	3	4	5	6
Income From Passenger Fares	27.00	27.00	48.60	48.60	48.60	48.60
	1.08	1.08	2.59	2.59	2.59	2.59
Net annual Income (A)	25.92	25.92	46.01	46.01	46.01	46.01
Direct Expenses						
Fuel	1.92	1.92	4.32	4.32	4.32	4.32
Drivers Wages	1.44	1.44	2.70	2.70	2.70	2.70
Tourist Guide Fees	1.20	1.20	2.70	2.70	2.70	2.70

Indirect Expenses						
Depreciation	6.00	6.00	10.50	10.50	10.50	10.50
Insurance	0.80	0.80	1.40	1.40	1.40	1.40
Reapirs	2.00	2.00	3.90	3.90	4.20	4.20
Interest on Term-Loan	4.50	4.05	6.98	6.19	5.40	4.61
Interest on W/C Loan	1.60	1.60	2.40	2.40	2.40	2.40
Garage rents, Etc.	0.60	0.60	1.00	1.00	1.00	1.00
Administration Expenses	1.20	1.20	2.00	2.00	2.00	2.00
Selling Expenses	1.20	1.20	1.20	1.20	1.20	1.20
Total Expenses (B)	22.46	22.01	39.10	38.31	37.82	37.03
Profit or Loss: (A – B)	3.26	3.91	6.91	7.70	8.19	8.98
	1.63	1.96	3.46	3.85	4.10	4.49
Profit After Taxes	1.63	1.95	3.45	3.85	4.09	4.49

21.7.4 Cash Flow Estimates

Cash Flow estimates Project, the physical movement of the cash into and out of the organization. Profitability estimates are concerned with long term viability of the project, whereas cash flow estimates deal with liquidity of the organization.

The following is basis of preparation of a cash Bow estimate:

Step 1: Adjustments to the Profit and Loss Estimates:

a) **Adjustments to Income:** The income of an organization is the basis for cash in-flows. However, differences arise between income and cash in-flows due to the following factors:

   i) **Income accrued but not received:** These amounts represent income that has been earned by the organization but not yet received like Credit sales.

   ii) **Incomes received in advance:** These amounts represent income that has not yet been earned by the organization but received in the form of cash. For example, advances from buyers for supply of goods.

b) **Adjustments to Expenditure:** The expenditure of an organization is the basis for its cash out-flows. However, differences arise between expenditure and cash out-flow due to the following factors:

   i) **Outstanding Expenditure:** These are amounts that are due for payment **but** not yet paid. For Example, Credit Purchases.

   ii) **Prepaid Expenses:** These are expenses for which the organization has already paid cash but has not utilized the **services.** For Example, rent paid in advance.

c) **Adjustments for Depreciation:** Depreciation is shown as an expense in the Profit and Loss, estimates. However, depreciation does not involve any cash out-flow. Hence, it is added to the profits or deducted from losses while calculating cash flow.

Step 2: Inclusion of Capital Items:

The Income and Expenditure **estimates** take into consideration only revenue items and do not consider Capital receipts and Capital payments. These items are incorporated into the cash flow statements.

Illustration - 2 (i.e. Tables - 2&3) explains the procedure for conversion of Income and Expenditure estimates into cash flow estimates taking into consideration adjustments pertaining to income and expenditure.

UVW Resorts has prepared the following Income and Expenditure estimates (Table-2) for the first six months of the year XXXX. Utilizing the additional information available, cash flow estimates will be prepared as per Table-3.

Table-2
Income & Expenditure Estimates for Ajay Resorts for first Six Months (Rupees in lakhs)

Particulars	Months					
	Jan	Feb	Mar	Apr	May	Jun
Income from Rents	14.00	16.00	24.00	26.00	14.00	14.00
Total Income (A)	14.00	16.00	24.00	26.00	14.00	14.00
Expenses						
Rents	2.00	2.00	2.00	2.00	2.00	2.00
Salaries	3.00	3.00	3.00	3.00	3.00	3.00
Wages	2.00	2.00	4.00	4.00	2.00	2.00
Purchase of Provisions for Restaurant	3.50	4.00	6.00	6.50	3.50	3.50
Electricity	0.50	0.60	1.30	1.60	0.50	0.50
Other Variable Expenses	1.00	1.20	1.70	1.80	1.00	1.00
Total Expenses (B)	12.00	12.80	18.00	18.90	12.00	12.00
Profit: (A – B)	2.00	3.20	6.00	7.10	2.00	2.00

1) 50% of the income is received one month in advance in the form of Advance Bookings. 25% of the income arises out of current bookings. Rest of the income is received after two months.

2) Rents, Salaries, Wages and electricity Bills are payable after the end of the month.

3) Suppliers of Provisions extend a credit of two months.

4) Other variable expenses are payable after two months. .rm70

Table-3
Cash Flow Estimates for Ajay Resorts for first Six Months (Rupees in Lakhs)

Particulars	Months					
	Jan	Feb	Mar	Apr	May	Jun
Income from Room Rents	--	--	6.00	6.50	3.50	3.50
			13.00	12.00	13.00	7.00
			3.50	4.00	6.00	4.50
	--	--	22.50	22.50	22.50	15.00
Expenses						
Rents	--	--	2.00	2.00	2.00	2.00
Salaries	--	--	3.00	3.00	3.00	3.00
Wages	--	--	2.00	4.00	4.00	2.00
Purchase of Provisions for Restaurant	--	--	3.50	4.00	6.00	6.50
Electricity	--	--	0.60	1.30	1.60	0.50
Other Variable Expenses	--	--	1.00	1.20	2.70	1.80
Total CAsh Out = flow	--	--	12.10	15.50	19.30	15.80

Note: It will not be possible to prepare cash flow estimates for the months of January and February unless we have information about income and expenditure of November and December months of the preceding year.

Projected Financial Position and Flows:

lllustrations 1 & 2 have familiarized you with the preparation of Profitability Estimates and Cash Flow Projections. In addition, Financial Institutions insist on Financial Position Projections. These refer to Projected Balance Sheet which show the assets and Liabilities of e organization at the end of each financial year under review.

21.8 ECONOMIC FEASIBILITY

Financial **Feasibility** refers to the benefits that accrue to the owners of the enterprise. Profitability measures the desirability of a project from the point of views of the owners. Economic Feasibility studies attempt to evaluate the contribution of the project to the overall objectives of economic development and national priorities. It is also referred as **Social Cost and Benefit Analysis** (SCBA).

Social Benefits that may arise out of a project include provision of employment, conservation of foreign exchange, contribution to research & Development efforts, role in meeting the defence needs of the country, etc. For example, taxes paid by an organization are a cost for the organization but they are a source of income to the **Government**. Social costs include increased pollution, depletion of scarce natural resources, utilization of foreign exchange for import of raw materials and technology, etc., SCBA is of course relevant only in the case of very large projects. However. inclusion of SCBA makes any Project Report more complete and **meaningful**.

Besides these aspects **the entrepreneur or an organisation promoting a project in tourism must take into account the needs and expectations of the local population at the destination along with their own efforts towrads Ecology and Environment protection methods.**

Check Your Progress-3

1) How do you determine the Project Cost?

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2) **What** do you understand by profitability analysis?

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21.9 TECHNIQUES OF APPRAISAL

Generally, promoters of a project approach Term Lending institutions for financing the Cost of the Project. Commercial banks are approached for financing working capital needs. However, Commercial Banks in India also finance project cost subject to certain monetary limits.

Such financial institutions appraise the Project Report submitted by the promoters for taking a decision on financing the project. Appraisal Studies include:

- Technical Appraisal,
- Marketing Appraisal,
- Financial Appraisal,
- Economic Appraisal, and
- Management Appraisal.

1) **Technical Appraisal:** Technical Appraisal aims at determining whether the prerequisites for successful and timely commissioning of the project are planned and provided for by the promoters. Information given under Technical **feasibility** as part of the Project Report is reviewed. Appraisal is also made of documents substantiating various claims made by the promoter.

2) **Marketing Appraisal:** The information provided under Market Feasibility in the Project Report is thoroughly reviewed. Wherever possible, information given by the promoter is cross checked with data available from reliable sources of information.

3) **Financial Appraisal:** **Financial Appraisal** constitutes a major appraisal activity by financial institutions. The following are the most important areas which are subject to a ,thorough appraisal:

- **Cost of the project:** A thorough check is made of **all** elements of the cost of Capital. Documentation in the form **of** Purchase **Invoices/Quotations** are insisted upon for all major assets. provisions made for Transport Costs, Installation expenses etc., are checked to **ensure** their adequacy.
- **Means of Financing:** The major sources of finance are thoroughly scrutinized. Arrangements made by the promoters for raising funds in the form of Merchant Banking **arrangements,** Under writing arrangements etc., thoroughly reviewed to assess whether the Company (organization) is capable of raising the required funds. Many financial institutions have norms regarding the minimum contribution to be brought in by the promoters in the form of equity capital. The appraisal officer checks whether these norms are satisfied by the applicant.
- **Profitability and Cash Flow estimates:** The Financial Feasibility part of the Project Report provides the basis for in-depth analysis. **All** the assumptions made by the promoter in projecting revenues and expenses are examined to ensure that they are realistic.
- **Ration Analysis:** Ratios are calculated to analyse the relationship between various variables like Profits and Sales, Sales and Assets, etc. The resulting ratios are compared with norms based on Industry averages. This will help the appraising agency to assess the financial soundness of the project.

  Ratios that are used for financial appraisal can be **broadly** classified into:

  - Liquidity Ratios
  - Capital Structure Ratios
  - Activity Ratios
  - Profitability Ratios

Liquidity Ratios measure the capacity of an **organisation** to meet its current liabilities. Rations **in** this category include: Current Ratio, Quick Ratio and Working Capital.

Capital Structure Ratios measure the solvency of the **organization.** Essentially, they measure the relation ship between own funds and borrowed funds. Ratios in this category include: Debt-Equity Ratio, Debt-Total Assets Ratio, Interest Coverage Ratio and other similar ratios.

Activity Ratios measure the efficiency of management as reflected in the utilization of various assets to generate sales. Rations such as Sales-Inventory Ratio, Sales-Debtors Ratio, Average Collection Period, Sales-Gross Assets Ratio and Sales-Capital Employed Ratio fall under this category.

Profitability Ratios measure the overall profitability of a project. Such rations include Gross Profit - Sales Ratio, Net Profit - Sales Ratio, Net Profit - Capital employed Ratio and other similar ratios. The final test of the overall **profitability** of any organization is **indicated** by the Accounting Rate of Return on **Investment** (ARORI) **which is equal** to

$$\text{ARORI} = \frac{\text{Net Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} = \frac{\text{Net Profit}}{\text{Assets}}$$

Break Even Analysis: **Break Even Point** (BEP) refers to the Sales **Value/Volume** at which the project earns neither **profit nor** loss. It is based on the difference in the **behaviour** of Fixed Costs and Variable Costs for any activity. Break Even Point is calculated **as** follows:

$$\textbf{BEP in Value} = \frac{\text{Fixed Costs}}{\text{Contribution Ration}}$$

$$\text{Contribution} = 1 - \frac{V}{S}$$

Where V = Variable Costs and S = Sales Revenue

A project has a higher degree of safety and security if its Break Even Sales can be reached at an early stage. The difference between the Actual Sales and Break Even Sales is called the Margin of Safety. This represents the extent to which the sales volume can decline without **pushing** project into losses.

- Cost of Capital: Cost of Capital refers to the minimum rate of return that any organization must earn on its investments to maintain the market value of the fum. It is represented by the expectations of the share holders regarding dividends and debt holders' expectations regarding interest rate. A company with a lower cost of Capital has a higher **probability** of success.

4) Economic Appraisal: Economic Appraisal is made only in the case of large projects whose activities have a wider impact on society. The expected Social benefits and Costs projected by the entrepreneur are reviewed by officers of the appraising agency.

5) Management Appraisal: The success of any venture to a very large extent depends on efficient and effective management. Hence, financial institutions generally undertake an appraisal of the Management of the enterprise. **Importance** is given to a study of:

- The character of the promoters.
- The involvement of promoters in the project.
- Their earlier track record **as** promoters.
- Their experience in business ventures of a similar nature.
- The technical competence and professional qualifications of key management personnel, etc.

In the case of companies, the Board of Directors constitutes the Management for purpose of appraisal. Incase of sole traders and partnership firms, the proprietors or partners constitute the Management for purpose of appraisal.

Check Your Progress-4

1) What is the relavance of Project appraisal?

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2) What **all** is covered under Financial Appraisal?

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21.10 LET US SUM UP

A Project refers to any investment opportunity which can be converted into a business proposition within a cost and time frame work. It is the foundation for the creation of a business organization. Any entrepreneur must search and screen economic opportunities before selecting an activity. He is expected to make a **feasibility** study of various aspects concerned with the project to establish its **viability.** Finally, using the information generated, he or she prepares a project report. Financial institutions take a decision regarding the extension of financial facilities after making a thorough appraisal of the project report submitted by the entrepreneur.

21.11 KEY WORDS

PERT : A network technique used for establishing the minimum time required for completion of a project through the identification of the activity **consuming** the longest time.

Market Segmentation : The process of dividing the market into distinctive sub markets based on factors like preference for tastes, size, quality-preference, price- preference etc., among **customers.**

Distribution Policy : It refers to practices of the organization by which the **product/ser-**vice is transmitted to the customers including the use of inter-mediaries like whole **salers,** retailers etc.

Time-Overrun : It occurs when the actual time taken for completion of any activity of the project exceeds the estimated time.

Cost-Overrun : It occurs when the monetary cost for completion of any activity of the project exceeds the budgeted cost.

Margin Money for Working Capital : It refers to that part of the working capital which is not **financed** by commercial banks.

21.12 ANSWERS TO CHECK YOUR PROGRES EXERCISES

Check Your Progress-1

1) Read **Sec. 21.2** for your answer. Also see Unit **2** of this course.

2) In **Sec. 21.4** various points related to this have been discussed.

Check Your Progress-2

1) Read **Sec. 21.5.**

2) You are **alaready** aware about the various **aspects** related to marketing. Since the success of any enterprise depends on marketing, marketing feasibility is a must in a Project Report. See **Sec. 21.6.**

Check Your Progress-3

1) See Sub-sec. **21.7.1.**

2) See Sub-sec. **21.7.3.**

Check Your Progress-4

1) This is done by financial institutions to assess the viability of the project in terms of profit. See Sec. 21.9.

2) Read Sec. 21.9.

SOME USEFUL BOOKS FOR THIS BLOCK

Bhattacharya S.K. and John **Dearden**	**Accounting for Management Text and Cases,** New **Delhi,** 1984.
J. Batty	**Management Accountancy,** Plymouth, 1982.
Prasanna Chandra	**Projects Preparation Appraisal, Budgeting and Implementation.**
IGNOU Management **Course** :	**MS-4, Understanding Financial Statements**
James M. **Poynter**	**Travel Agency Accountancy Procedures,** New York, 1991

ACTIVITIES FOR THIS BLOCK

Activity 1

Identify any Project opportunities related to Tourism in your locality, **establishing** their prima **facie** viability.

Activity 2

Your friend approaches you and states that he intends to start a business **with** a capital of **Rs.10** lakhs in your native town. What are the various business opportunities you would bring to his notice?

Activity 3

What factors would you consider in projecting the revenues from a restaurant?

Activity 4

Procure a copy of Profit and Loss Account for two years from any of the firm located in your area. **Analyse** the comparative profitability.

Activity 5

Procure a copy of Balance Sheet from two companies located in your area for two consecutive years. Analyse the comparative financial position of there two companies.