

# **Course Outline for Management undergraduate program**

- **Course code**                      **MGMT3192**
- **Course Title**      **Project Management**

**Academic Year: 2020 Semester II**

# **CHAPTER FOUR**

## **PROJECT PREPARATION**

# CHAPTER IV - PROJECT PREPARATION

- Once ideas emerged from idea source they need to be screened and evaluated.
- Project idea need to be screened and assessed for viability once they have been identified.
- Hence, in this chapter discussion will be on :
  1. Pre-feasibility studies/ Preliminary screening and
  2. Feasibility study in project scanning & selection

Identification of suitable projects whose desirability and suitability should conform to the established objectives

# 4.1 Preliminary screening

- **Preliminary Screening:**
- Preliminary screening is done with a view to avoid unnecessary cost and efforts in detailed study, if idea is not looking worthwhile in first instance
- **DEFINITION** : Preliminary screening can be defined as a series of steps to know whether or not a complete detailed feasibility study should be made.
  - This calls for a quick preliminary screening by experienced professionals who could also modify some of the proposal.
  - At this stage the analyst should eliminate proposals that are technically unsound
  - Some kind of preliminary screening is required to eliminate ideas which prima facie are not promising .

# OBJECTIVES OF PRELIMINARY SCREENING

- To determine whether project (idea) is promising business opportunity or not.
- Whether it justified a detailed analysis or not
- To find out any critical aspect on which success or failure depends
- To formulate a plan for detailed feasibility study

# The following aspects maybe looked into

1. **consistency** with the government priorities
2. Availability of **inputs**/Availability of raw materials & resources.  
The resources and inputs required for the project must be assured.
3. Adequacy of markets/marketability or **demand**  
Is there market for the idea? Are you provide what you want ?
4. **Profitability** if the idea implemented.
5. **Financial** requirements
5. **Acceptability** of risk level
6. Technological changes, competition from substitutes, competition from imports ,etc.

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When a firm evaluates a large number of project ideas regularly, it is helpful to streamline the process of preliminary screening.

For this purpose, a preliminary evaluation may be translated into a **project rating index**.

The steps involved in determining the project rating index are as follows.

1. Identify factors relevant for project rating
2. Assign weights to these factors (the weights are supposed to reflect their relative importance)
3. Rate the project proposal on various factors ,using a suitable rating scale(Likert scale is appropriate)
4. For each factor ,multiply the factor rating with the factor weight to get the factor score.
5. Add all the factor scores to get the overall project rating index.

Once the project rating index is determined , it will be compared to judge whether the project is prima facie worthwhile or not.

## 4.2 Preparing a project Feasibility study in project scanning & selection

Once the preliminary appraisal for the projects and idea screening have been conducted ,the next step is undertaking a feasibility study.

### **What is feasibility study ?**

- It is a way of testing proposed activities to see if they can work successfully.
- Feasibility study is the best input for developing project plan
- The project Feasibility studies are detailed analysis of the project in different dimensions that lead to an investment decision.



- Feasibility literally means whether some idea will work or not.
- It involves an examination of the operations, financial, HR and marketing aspects of a business
- **OBJECTIVES OF PROJECT FEASIBILITY STUDY**
  - It guarantees the success of Project
  - It works as basic terms of reference for Project
  - It describes the nature and complexity of Project
  - It gives an idea about investment in Project
  - It also provides us the possible future difficulties
  - It gives an idea about economic and social benefits

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- There is no universal format for a feasibility study. Feasibility studies can be adapted and shaped to meet the specific needs of any given situation.
- A feasibility study is designed to provide an overview of the primary issues related to a business idea.
- In other words, a feasibility study determines whether the business idea makes sense.

## **Types of Feasibility:**

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| • <b>Technical Feasibility</b>   | <b>Safety Feasibility:</b>        |
| • <b>Managerial Feasibility:</b> | <b>Political Feasibility:</b>     |
| • <b>Economic Feasibility:</b>   | <b>Market Feasibility:</b>        |
| • <b>Financial Feasibility</b>   | <b>Environmental Feasibility:</b> |
| • <b>Cultural Feasibility:</b>   | <b>Social Feasibility:</b>        |

**Since the feasibility study can be undertaken in various ways**

. For our purpose we will consider the following facet of project analysis

**1. Market & demand analysis**

**2. Technical analysis**

**3. Financial and Economic Analysis**

**4. Social cost benefit analysis (scba)**

## 4.2.1 Market and demand Analysis in project scanning & selection

Market and demand analysis is concerned primarily with two questions;

1. What would be the **aggregate demand** of the proposed project in the future?
2. What would be the **market share** of the project under appraisal?

To answer these questions the kind of information required are :

1. Situational analysis and specification of objectives
2. Collection of secondary information
3. Conducting market survey
4. Characterization of the market
5. Demand forecasting
6. Uncertainties in demand forecasting
7. Market planning.



# 1.Situational Analysis & Specification of Objectives

Situational Analysis provides the **current status of the key aspects** of the market and its participants.

- The aspects include:
  - Customers**: customer's preferences & purchasing power
  - Competitors**: strategies & actions of competitors, and
  - Middlemen/intermediary**: practices of middlemen
- A situation analysis may generate data that will provide a **vague idea** of the market and provide a basis for rough demand and revenue projection. If the situation analysis points a **promising picture for the project**,
- a formal market study is warranted to provide more accurate and reliable data that can be used for investment decision making.
- To carry out such a study it is necessary to **specify the objectives as clearly and as comprehensive as possible**

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- **A common approach to do this is to structure them in the form of questions.**
- Eg. suppose Sony Corporation developed technology to produce superior plasma television set; and
- The management wants know **where and how to market the TVs.**
- The objectives of the market and demand analysis may be to answer the following questions:
  - a) Who are the buyers of the TVs?
  - b) What is the current demand of the TVs?
  - c) How is the demand distributed geographically and seasonally?
  - d) What is the component demand of TVs of various sizes?
  - e) What prices will the customers be willing to pay for the superior TVs?
  - f) What price and warranty will ensure acceptance
  - g) What distribution channels are the most suited for the TVs and what margins will induce distributors to carry it?
  - h) What are the prospects for immediate sales?

## **2.Collection of Secondary Information**

- Information may be obtained from secondary and /or primary sources.
- Secondary information is information that has been gathered in some other context and is already available.
- Primary information, on the other hand, represents information that is collected for the first time to meet the specific purpose on hand.
- Secondary information provides the base and the starting point for the market and demand analysis.



# ***3. Conduct of Market Survey***

- Secondary information, though useful often, does not provide a comprehensive basis for market and demand analysis.
- It needs to be supplemented with primary information gathered through a market survey, specific to the project being appraised.
- Consequently primary information is sought through a market survey.
- The survey could be a **census**; where the entire population is covered or a **sample survey**; only a proportion of the population is covered
- Information sought in a market survey may cover one or more of the following areas:
  - a) Total demand and rate of demand growth
  - b) Demand in different segments of the market
  - c) Income and price elasticity of demand
  - d) Motives for buying
  - e) Purchasing plans and intentions
  - f) Satisfaction with existing products
  - g) Unsatisfied needs
  - h) Attitude towards various products
  - i) Social economic characteristics of buyers
  - j) Customer preferences etc

# Steps in a sample survey

- A sample survey consists of the following steps.
- Define the target population
- Select the sampling scheme and sample size.
- Develop the questionnaire
- Recruit and train the field investigators
- Obtain information as per questionnaire from the sample respondents
- Scrutinize the information gathered
- Analyze and interpret the information.

# **The result of market survey can be vitiated by**

- Non-representativeness of the sample
- Imprecision and inadequacy of the questions,
- Failure of respondents to comprehend the questions
- Deliberate distortions in the answers given by respondents
- Inept handling of the interviews by the investigators
- Cheating on the part of investigator
- Slipshod scrutiny of data and
- Incorrect and inappropriate analysis and interpretation of data

# Market survey Assignment

- Suppose you are professional and recruited to make survey on one of the following :

- ✓ Demand for the product/service
  - ✓ Total demand and rate of demand growth
  - ✓ Demand in different segments of the market
  - ✓ Income and price elasticity of demand
  - ✓ Motives for buying
  - ✓ Purchasing plans and intentions
  - ✓ Satisfaction with existing products
  - ✓ Unsatisfied needs
  - ✓ Attitude towards various products
  - ✓ Social economic characteristics of buyers
  - ✓ Customer preferences etc

Thus, Conduct survey and report to your partner

# 4. Characterization of Market

- Based on the information gathered from the secondary information survey and the market survey, the market for a product may be described in terms of the following:

## 1. Effective Demand; Past and Present:

*In a competitive market Effective demand in the past and present are equal to apparent consumption which is defined as :*

## 2. Breakdown of Demand:

- To get a deeper insight into the nature of demand, the aggregate market demand may be broken down into demand for different segments of the market.
- **Market segments may be defined by :**
  - *Nature of Product*
  - *Consumer group*
  - *Geographical Division*

### **3. Price**

It may be wise to distinguish between the following prices:

manufacturer's price; wholesaler's price; retail price etc.

### **4. Methods of Distribution and Sales Promotion:**

Methods of distribution may vary with the nature of the product.

Capital goods, industrial raw materials or intermediates and consumer products tend to have different distribution channels.

Methods used for sales **promotion** (advertising, discounts, gift schemes, etc.) may vary from product to product.

# Consumers

Consumers may be characterized along two dimensions

Demographic and sociological		Attitudinal	
Age	sex	Preferences	intentions
Income	profession	Habits	Attitudes
Residence ,	social background	Responses	

**Supply and Competition:** The location, present production, planned expansion, capacity utilization level of competitors is crucial information.

- Substitutes and near substitutes should be noted too.
- **Government Policy:**
  - The role of the government in influencing the market and demand of a product may be significant; as such government policies and legislations that have an impact on the product should be spelt out. These are reflected in:
  - Production targets in national plans, Import and export controls, export incentives, excise duties ,Import duties, financial regulations, Sales tax, industrial licensing, preferential purchases, credit control, and subsidies

# 5.Demand Forecasting

- After gathering information about the various aspects of the market and demand from primary and secondary sources, attempt may be made to estimate future demand.
- **Demand Forecasting is the art of predicting demand for a product or a service at some future date on the basis of certain present and past behaviour patterns of some related events."**



## Characteristics of a Good Demand Forecasting

- ◆ Accuracy
- ◆ Simplicity
- ◆ Economy
- ◆ Timeliness
- ◆ Availability

## ◆ Methods of Demand Forecasting

1. Survey of buyer's intentions
2. Collective opinion method
3. Expert opinion method
4. Controlled experiments
5. Study of general economic environment

These methods can be grouped in two categories

**1. Qualitative method**

**2. Time series projection methods**

# 5.1. Qualitative method

These methods rely on the judgment of experts to translate qualitative information into quantitative estimates. The important methods are :

**i. Jury of executive opinion method:**

- A panel of experts or senior managers is brought together in committee to pool members' individual forecasts.
- Then having agreed (or at least discussed )their individual cases a forecast emerges.
- As the quality of forecasts on depends on the quality of participants the jury should comprises best possible teams.
- If the views of more number of experts are obtained, and if their views differ significantly, then a forecast can be safely arrived at by taking the average of the expert's predications
- under this method opinions are sought from a group of managers on the expected future sales they are then translated into sales estimates

# **The advantages of this method**

- It is an expeditious method for developing a demand forecast
- It permits a variety of factors like economic climate, competitive, environment, consumer preference, technological developments, and so on, to be included in the subjective estimates provided by the experts
- It has immense appeal to managers who tend to prefer their judgment to mechanistic forecasting procedures.

## **The disadvantages of this method are:**

- The biases underlying subjective estimates can not be unearthed easily.
- The reliability of this technique is questionable

## **ii. Delphi method**

opinions are sought from a group of experts who don't know the identity of each other, any divergent opinions are then mailed back to back for further opinion until a consensus is obtained.

1. A group of experts is sent a questionnaires by mail and asked to express their views.
2. The responses received from the experts are summarized without disclosing the identity of experts.
3. The process may be continued for one or more rounds till a reasonable agreement emerges.

- Delphi method appeals to many organization for the following reasons:
  - It is **understandable** to users
  - It seems to be **more accurate** and **less expensive** than traditional face-to-face group meetings

## 5.2. Time Series Projection Methods

.These methods generate forecasts on the bases of the historical time series. The important time series projection methods are:

- i. Trend projection method**
- ii. Exponential smoothing method**
- iii. Moving average methods**

# i. Trend projection method:

This involves determining the trend of consumption by analyzing past consumptions data and then projecting future consumption by extrapolating the trend.

- The most common method of extrapolation is the linear regression.  **$Y = a + b_1x$**
- In forecasting the independent variable is time, we will use  **$t$**  instead of  **$x$** .
- We will use  **$T_t$**  in place of  **$y$** . Thus, for a linear trend, the estimated sales volume expressed as a function of time can be written as follows.

- **$T_t = a + b_1t$**

Where  $T_t$  = Trend values of time series in period  $t$ .

$a$  = intercept of the trend line of the relationship

$b_1$  = slope of the relationship

$t$  = time variable

# Computing the slope $b_1$ and intercept $a$

$$b_1 = \frac{\sum t Y_t - (\sum t \sum Y_t)/n}{\sum t^2 - (\sum t)^2 / n}$$

$$a = \bar{Y} - b_1 \bar{t}$$

**Where**

**$Y_t$ =demand in time  $t$**

**$n$ =number of observation**

**$\bar{t}$  = Mean of  $t$ : that is  $\sum t/n$**

**$\bar{Y}$ =Mean of  $Y$ , that is**

$$\bar{Y} = \sum Y / n$$

**Consider the time series for bicycle sales over the past ten years**



