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1. **It is said that firms are generally organized for profit earning. In the managerial economics, profit management is a challenging issue. Explain?**

**Answer:**

**THE THEORY OF THE FIRM:**

The behavior of firms is usually analyzed in the context of an economic model, an idealized version of a real-world firm. The basic economic model of a business enterprise is called the theory of the firm.

**PROFIT MAXIMIZATION AND THE FIRM.**

Under the simplest version of the theory of the firm it is assumed that profit maximization is its primary goal. In this version of the theory, the firm's owner is the manager of the firm, and thus, the firm's owner-manager is assumed to maximize the firm's short-term profits (current profits and profits in the near future). Today, even when the profit maximizing assumption is maintained, the notion of profits has been broadened to take into account uncertainty faced by the firm (in realizing profits) and the time value of money (where the value of a dollar further and further in the future is increasingly smaller than a dollar today). In this more complete model, the goal of maximizing short-term profits is replaced by goal of maximizing long-term profits, the present value of expected profits, of the business firm.

Defining present value of expected profits is based on first defining "value" and then defining "present value." Many concepts of value, such as book value, market value, going-concern value, break-up value, and liquidating value, are encountered in business and economics. The value of the firm is defined as the present value of expected future profits (net cash flows) of the firm. Thus, to obtain an estimate of the present value of expected profits, one must identify the stream of net cash flow in future years.

**THE CONSTRAINED PROFIT MAXIMIZATION.**

Profit maximization is subject to various constraints faced by the firm. These constraints relate to resource scarcity, technology, contractual obligations, and laws and government regulations. In their attempt to maximize the present value of profits, business managers must consider not only the short-term and long-term implications of decisions made within the firm, but also various external constraints that may limit the firm's ability to achieve its organizational goals.

The first external constraint of resource scarcity refers to the limited availability of essential inputs (including skilled labor), key raw materials, energy, specialized machinery and equipment, warehouse space, and other resources. Moreover, managers often face constraints on plant capacity that are exacerbated by limited investment funds available for expansion or modernization. Contractual obligations also constrain managerial decisions. Labor contracts, for example, may constrain managers' flexibility in worker scheduling and work assignment. Labor contracts may also determine the number of workers employed at any time, thereby establishing a floor for minimum labor costs. Finally, laws and regulations have to be observed. The legal restrictions can constrain decisions regarding both production and marketing activities. Examples of laws and regulations that limit managerial flexibility are: the minimum wage, health and safety standards, fuel efficiency requirements, antipollution regulations, and fair pricing and marketing practices.

**PROFIT MAXIMIZATION VERSUS OTHER MOTIVATIONS BEHIND MANAGERIAL DECISIONS.**

The present value maximization criterion as a basis for the study of the firm's behavior has come under severe criticism from some economists. The critics argue that business managers are interested, at least partly, in factors other than the firm's profits. In particular, they may be interested in power, prestige, leisure, employee welfare, community well-being, and the welfare of the larger society. The act of maximization itself has been criticized; there is a feeling that managers often aim merely to "satisfice" (seek solutions that are considered satisfactory), rather than really try to optimize or maximize (seek to find the best possible solution, given the constraints).

**BUSINESS VERSUS ECONOMIC PROFITS.**

An economist also defines profit as the difference between sales revenue and costs of doing business, but includes more items in figuring costs, rather than considering only explicit accounting costs. For example, inputs supplied by owners (including labor, capital, and space) are accounted for in determining costs in the definition used by an economist. These costs are sometimes referred to as implicit costs—their value is imputed based on a notion of opportunity costs widely used by economists. In other words, costs of inputs supplied by an owner are based on the values these inputs would have received in the next best alternative activity. For illustration, assume that the owner of the firm works for ten hours a day at his business. If the owner does not receive any salary, an accountant would not consider the owner's effort as a cost item. An economist would, however, value the owner's service to his firm at what his labor would have earned had he worked elsewhere. Thus, to compute the true profit, an economist will subtract the implicit costs from business profit; the resulting profit is often referred to as economic profit. It is this concept of profit that is used by economists to explain the behavior of a firm. The concept of economic profit essentially recognizes that owner-supplied inputs must also be paid for. Thus, the owner of a firm will not be in business in the long run until he recovers the implicit costs (also known as normal profit), in addition to recovering the explicit costs, of doing business.

 **Conclusion:**

In conclusion it can be argued that success of a firm depends on its primary measure and that is profit. Firms are operated to earn long term profit which is generally the reward for risk taking. Appropriate planning and measuring profit is the most important and challenging area of managerial economics. More over profit management is a challenging issue in managerial economics because it confines an organization to make decisions within the constraints posed to the business from its internal and external environment.

**3.Define Supply? Discuss determinants of Supply.**

**Answer**

 **Meaning of supply**:-

 Supply is the amount of the goods or service, producers are willing and able to offer for sale at each possible price during a period of time, everything else held constant. Supply is a relative term. It is always referred to inrelation to price and time. A statement of supply without reference to price and time conveys no economic sense.

 **Supply vs Quantity supplied‖**

Quantity supplied‖ is the amount of the good or service producers are willing and able to offer for sale at a specific price during a period of time, everything else held constant. Thus, the term supply refers to the entire relationship between the price of a commodity and the quantity supplied at various possible prices.

 Two things are worth mentioning about the concept of supply. First, supply is a flow concept, that is, it refers to the amount of a commodity that the firms produce and offer for sale in the market per period of time, say a week, a month or a year. Without specifying the time period, supply of a commodity has a little meaning. Second, the quantity supplied of a commodity which the producers plan to produce and sell at a price is not necessarily the same as the quantity actually sold. Sometimes, the quantity which the firms are willing to produce and sell at a price is greater than the quantity demanded, so the quantity actually bought and sold is less than the quantity supplied.

**Supply and stock**:-

 The ability of a seller to supply a commodity, depends primarily on stock available with him. Thus, stick is the determinant of supply. Supply and stock are related but distinct terms:

a) **Supply comes out of the stock**:- Supply is the amount of stock offered for sale at a given price. Thus, stock is the basis of supply. Without stock, supply is not possible.

b) **Stock determines the potential supply**:- Actual supply, on the other hand, is the stock or quantity really offered for sale by the seller at a particular price during a certain period. Evidently, the limit to maximum supply, at a time is set by the given stock. Actual supply may be a part of the stock or the entire stock at the most. Thus, the stock can exceed supply, but supply cannot exceed the given stock, at any time.

c) **Stock is the outcome of production** :- By increasing production, the stock can be increased, as well as the potential supply. Sometimes, increase in actual supply can exceed the increase in current stock, when along with the fresh stock, old accumulated stock is also released for sale at the prevailing price. Thus supply can exceed the current stock, but it can never exceed the total stock-old plus new stock taken together during a given period.

 **Determinants of supply**:-

 The supply of a product is largely determined by a number of factors, some of which are enumerated below:

A) **The price of the commodity**:- Supply is positively related to the price of the commodity. With all the other factors remaining the same, if the price of the product rises, suppliers would find it profitable to sell more and vice-versa. Thus, price has a positive effect on quantity supplied.

B) **Cost of Production**:- The cost of production of a commodity depends on the prices of the various factors of production. If the price of extensive factor(s) of production rises, the production costs would be higher for the same level of output. Conversely, a fall in the prices of a factor would reduce the cost of production. In both cases, the supply will be affected. When costs fall, supply will definitely be increased and when costs rise, supply will definitely be reduced.

C**) State of technology**:- Technology bears a positive relationship with supply. Advances in technology reduces cost of production per unit of output, enhances productivity of factors of production and thus increases the supply of the product.

 D) **Government Policies**:- Government Policies are related to taxes and subsidies on certain products. A tax on a commodity or a factor of production raises its cost of production; consequently production is reduced and hence supply of the product. A subsidy, on the other hand, provides an incentive to production and augments supplies. E) Exogenous Factors:- Weather conditions, floods and droughts, epidemics, etc. do cause fluctuations in the supply of goods, particularly of agricultural goods. Fire, war, and earthquakes may destroy productive assets of a commodity and curtail future supplies.

**Supply Function**:-

The functional representation of the relationship between supply and its various determinants, is termed as supply function. In a supply function, Supply is the dependent variable and the determinants of supply are independent variable. The supply function of a commodity represents the quantity of the commodity that would be supplied at a price, levels of technology, input prices and all other factors that influence supply.

 In a supply function, the determinants of supply can be supplied as under:

 SX = f (PX, C, T, G, E) ----------------------------(1)

Where, SX = The supply of commodity X

 PX = The price of X

 C = Cost of Production (wages, rent, interest, and prices of raw materials)

 T = State of Technology

 G = Government Policy regarding taxes and Subsidies.

 E = Factors outside the Economic Sphere. (Exogenous factors)

**The Law of Supply**:-

 The purpose of theory of supply is to establish the law of supply. The law of supply describes the seller‘s supply behavior under given conditions. The law reflects the general tendency of the sellers in offering their stock of a commodity for sale in relation to the varying prices.

 Under the ―Ceteris paribus‖ assumption, the law of supply states that:

 “Other things remaining the same, the higher the price of a commodity, the greater is the quantity supplied and vice-versa”.‖

 **The formal statement of the law of supply consists of five phases**:

1. The quantity of well-defined good or service

2. Producers are willing and able to offer for sale

3. During a particular period of time

4. Increases as the price of the good or service increases and decreases as the price decreases

5. Everything held constant.

**Explanation** :-

 The law of supply can be well explained and better understood with the help of Supply Schedule‖ and Supply curve.

**Supply Schedule**

 A supply schedule is a table or list of prices and corresponding quantities supplied of a particular good or service. In other words, the tabular representation of the different combinations of price and corresponding quantity supplied of a commodity, is known as the supply schedule of that particular commodity.

**Supply curve**

The supply curve is a graphic representation of the correlation between the cost of a good or service and the quantity supplied for a given period. In a typical illustration, the price will appear on the left vertical axis, while the quantity supplied will appear on the horizontal axis.

2.**Under the umbrella of Business Management Demand analysis and forecasting play key role for a successful business. Discuss?**

**Answer**

 **INTRODUCTION:**

 Demand analysis and forecasting provides an estimate of future demand and the basis for planning and sound business decisions. Since all organizations deal with an unknown future, some error between a forecast and actual demand is to be expected. Thus, the goal of a good forecasting technique is to minimize the deviation between actual demand and forecast. Since a forecast is a prediction of the future, factors that influence demand, the impact of these factors, and whether these factors will continue influence future demands must be considered in developing an accurate forecast.

 **TIMELINE OF BUSINESS ANALYSIS AND FORECASTING:**

 A forecast and its conclusion are valid within specific time frame. These time frames are categorized as follows:

1. **Long Term Analysis Forecast:**

 This type of forecast is made for a time frame of more than three years. These types of forecast are utilized for long-term strategic planning in terms of capacity planning, expansion planning, etc.

1. **Mid-Term Analysis Forecast:**

 This type of forecast is made for a time frame from three months to three years. These types of forecasts are utilized production and layout planning, sales and marketing planning, cash budget planning and capital budget planning.

1. **Short Term Analysis Forecast:**

 This type of forecast is made of a time frame from one day to three months. These types of forecasts are utilized for day to day production planning, inventory planning, workforce application planning, etc.

##  IMPORTANCE OF DEMAND ANALYSIS AND FORECASTING:

 Importance of Demand Analysis and Forecastingis given below:

1. **Distribution of resources:** We know that inputs are processed to result into output. These inputs include resources like materials, machinery and of course human resources.The business firm also has to make decisions regarding capital arrangement, manpower planning and so on. In short, the estimation of demand enables the firm to undertake critical business decisions.
2. **Helps in avoiding wastages of resources:** Demand forecasting is not an option but compulsion in today’s competitive environment. In order to avoid wastages,it is always beneficial to have a sense of future demand forproducts and services.
3. **Serves as a direction to production:** If there is a proper prediction of the demand, then it serves as a handy tool for the businesses to undertake future production activities. According to the demand in the market, the company can control their production.
4. **Pricing:** The decision regarding the pricing of goods and services is perhaps one of the most critical business decisions. If there are sincere predictions about the future sales of the firm’s product then it could serve as a good aid to devise pricing strategies.
5. **Sales policy:** Production is followed by sales. The business firms can plan their sales policy effectively on the backdrop of demand forecasting.This also implies that the distribution of goods and services can be done appropriately depending upon the predictions of the demand for the product.
6. **Decrease of business risk:**Where there is a business there is arisk. Demand forecasting though does not completely remove the business uncertainties, helps in reducing the risks and uncertainties to a certain extent.
7. **Inventory management:** Inventories is one of those aspects which is closely associated with demand. This is because inventories are kept by the producers to meet the demand in the coming times.

**Conclusion:**

 From the presentation of the foregoing discussion, it can be concluded that Demand Analysis and Forecasting is an important feature of any business. To businesses, Demand Forecasting provides an estimate of the amount of goods and services that its customers will purchase in the foreseeable future. Critical business assumptions like turnover, profit margins, cash flow, capital expenditure, risk assessment and mitigation plans, capacity planning, etc. are dependent on Demand Forecasting.

**4.Discuss Monopoly Equilibrium in the Firm?**

 **Firm**

A firm is a for-profit business organization such as a corporation, limited liability company , or partnership,that provides professional services. Most firms have just one location.However, a business firm consists of one or more physical establishments, in which all fall under the same ownership and use the same employer identification number.

When use , "firm" is typically associated with businesses that practice law, but the term may be used for a wide variety of businesses, including accounting, consulting, and graphic.

**Equilibrium in Monopoly**

The conditions for Equilibrium in Monopoly are the same as those under perfect competition. The marginal cost (MC) is equal to the marginal revenue (MR) and the MC curve cuts the MR curve.

**Equilibrium Condition**

**Under monopoly, for the equilibrium and price determination there are two different conditions which are:**

1. Marginal revenue must be equal to marginal cost.

2. MC must cut MR

**Approaches to determine Equilibrium**

However, there are two approaches to determine equilibrium price under monopoly i.e:

1. Total Revenue and Total Cost Approach.

2. Marginal Revenue and Marginal Cost Approach.

**Total Revenue and Cost Approach:**

Monopolist can earn maximum profits when difference between TR and TC is maximum. By fixing different prices, a monopolist tries to find out the level of output where the difference between TR and TC is maximum. The level of output where monopolist earns maximum profits is called the equilibrium situation. This can be explained with the help of fig.



In Fig, TC is the total cost curve. TR is the total revenue curve. TR curve starts from the origin. It indicates that at zero level of output, TR will also be zero. TC curve starts from P. It reflects that even if the firm discontinues its production, it will have to suffer the loss of fixed costs.

Total profits of the firm are represented by TP curve. It starts from point R showing that initially firm is faced with negative profits. Now as the firm increases its production, TR also increases. But in the initial stage, the rate of increase in TR is less than TC.

Therefore, RC part of TP curve reflects that firm is incurring losses. At point M, total revenue is equal to total cost. It shows that firm is working under no profit, no loss basis. Point M is called the breakeven point. When firm produces more than point M, TR will be more than TC. TP curve also slopes upward. It shows that firm is earning profit. Now as the TP curve reaches point E then the firm will be earning maximum profits. This amount of output will be termed as equilibrium output.

### 2.Marginal Revenue and Marginal Cost Approach:

According to marginal revenue and marginal cost approach, a monopolist will be in equilibrium when two conditions are fulfilled i.e.,

1. MC=MR
2. MC must cut MR
 The study of equilibrium price according to this analysis can be conducted in two time periods.
* Short run.
* Long run.

#### Long Run Equilibrium under Monopoly:

Long-run is the period in which output can be changed by changing the factors of production. In other words, all variable factors can be changed and monopolist would choose that plant size which is most appropriate for specific level of demand. Here, equilibrium would be attained at that level of output where the long-run marginal cost cuts marginal revenue curve from below. This can be shown with the help of Fig.



In Fig. monopolist is in equilibrium at OM level of output. At OM level of output marginal revenue is equal to long run marginal cost and the monopolist fixes OP price. HM is the long run average cost? Price OP being more than LAC i.e., HM which fetch the monopolist super normal profits. Accordingly, the monopolist earns JM – HM = JH super normal profit per unit. His total super normal profits will be equal to shaded area PJHP

* **Short run Equilibrium under Monopoly:**

Short period refers to that period in which the monopolist has to work with a given existing plant. In other words, the monopolist cannot change the fixed factors like, plant, machinery etc. in the short period. Monopolist can increase his output by changing the variable factors. In this period, the monopolist can enjoy super-normal profits, normal profits and sustain losses.