

**The Institute of Finance Management**  
**Accounting and Finance Department**  
**Lecture Notes**  
**Pricing Decision**  
**BACC 3 and BAIT 3**  
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### **1.1 Introduction**

Pricing decisions must have some regard for cost, and the selling price of a product must exceed its average unit cost of sale to make a profit. However, pricing decisions must also recognize the importance of a range of other factors which can be grouped collectively under the general heading of demand.

Thus, Price can be defined as the money or other consideration, including other products and services, exchanged for the ownership or use of a product or service.

In any organization pricing is important because:

- It makes a pivotal contribution to profit maximization – the overriding aim of most businesses.
- Businesses make profits by selling goods and services at a price higher than their cost.
- The amount that they can sell will often be determined by the price charged for the goods and services.

### **1.2 Factors Influencing the Pricing of the Product or Service**

- Customers: how will buyers respond?
- Price elasticity or people's sensitivity to price changes, affects the demand for products
- Competitors: How competitors price and sell their products will have a tremendous effect on a firm's pricing decisions. The availability of substitute products affects a company's pricing decisions as well
- The Economy: The economy also has a tremendous effect on pricing decisions the economic environment includes interest rates and unemployment levels. When the economy is weak and many people are unemployed, companies often lower their prices. In international markets, currency exchange rates also affect pricing decisions.
- Government Laws and Regulations: Pricing decisions are affected by government regulations. Regulations are designed to protect consumers, promote competition, and encourage ethical and fair behavior by businesses
- The costs of the product—its inputs—including the amount spent on product development, testing, and packaging required to have to be considered when a pricing decision is made.

### **1.3 Different Types of Market Structures**

Market structure and pricing decisions are closely related. The degree to which the firm gets to choose price is determined in large part by market structure

There are two extreme cases:

- Perfect competition Market and
- Imperfect competition Market

### **1.3.1 Perfect Competition**

The perfect competition is the market structure which has the following conditions

- Large numbers of buyers and sellers
- Homogeneous product
- Free entry and exit
- Perfect information

### **1.3.2 Imperfect Competition Market**

Imperfect competition refers to the market structure that does not meet the conditions of perfect competition. Its forms include

- (i) Monopoly: in which there is only one seller of a good. The seller dominates many buyers and can use its market power to set a profit maximising price.
- (ii) Oligopoly, in which a few companies dominate the market and are interdependent firms, must take into account likely reactions of their rivals to any change in price, output or forms of non price competition.
- (iii) Monopolistic competition, in which products are similar, but not identical. There are many producers ('price setters') and many consumers in a given market, but no business has total control over the market price

## **1.4 Pricing Policy**

Pricing policy of the organization is crucial to a good marketing strategy, the price in which the organization charges to its products or services will greatly affect its sales volume, profit level and the business image. In order to the organization to establish an effective pricing policy, the following three main aspects which make up the pricing policy of any organization should be focused;

## **1.5 The Pricing Objectives**

**Pricing objectives** or goals give direction to the whole pricing process, a goal that guides a business in setting the cost of a product or service to potential consumers.

A pricing objective underlies the pricing process for a product, and it should reflect a company's marketing, financial, strategic and product goals, as well as consumer price expectations and the levels of available stock and production resources

When deciding on pricing objectives you must consider: 1) the overall financial, marketing, and strategic objectives of the company; 2) the objectives of your product or brand; 3) consumer price elasticity and price points; and 4) the resources you have available.

Some of the more common pricing objectives are:

- maximize long-run profit
- maximize short-run profit
- increase sales volume (quantity)
- increase market share
- obtain a target rate of return on investment (ROI)
- company growth

- maintain price leadership
- discourage new entrants into the industry
- match competitors prices
- survival

## **1.6 The Pricing Strategy**

Pricing strategy are those activities aimed at finding a product's optimum price, typically including overall marketing objectives, consumer demand, product attributes, competitors' pricing, market and economic trends. Pricing strategies adopted should be consistent with organization objectives

In determining the organization's optimal pricing strategy, the management should consider the five forces that influence other business decisions; these forces include the following;

- The company's competitors
- The company's suppliers
- The availability of substitute products or services
- The company's customers and
- The Positioning of how the company wants to be perceived by its target audience

Therefore, it should be noted that pricing strategy is not simply about raising prices, but it is about building a foundation for profitable growth. There are many different pricing strategies in which the organization can use; some of these pricing strategies are discussed below:

### **1.6.1 Skimming pricing strategies**

Price skimming is a pricing strategy that companies adopt when they launch a new product. In this strategy, while launching a product company sets a high price for a product initially and then reduces the price as time passes by to recover the cost of a product quickly.

Price skimming is about charging extraordinarily high prices to customers. This type of strategy is associated with innovative and luxury goods having a short product life cycle. This type of strategy is suitable for businesses having cash flow problems. This strategy is also adopted by risk-taker businesses

An example of price skimming would be mobile phones which have some added features are sold at higher prices and then prices begin to decline as time passes

#### **Skimming is most appropriate when:**

- Demand for the product or service is expected to be relatively inelastic; that is, the customers are not highly price-sensitive.
- Large cost savings are not expected at high volumes, or it is difficult to predict the cost savings that would be achieved at high volumes.
- The company does not have the resources to finance the large capital expenditures necessary for high-volume production with initially low-profit margins.
- There are effective entry barriers to new firms entering that particular market, hence the firm already exists and enjoys the monopoly power
- In the market, some sufficient customers are prepared to purchase the firm's product or service at a high price

- Where there is large costs such research and development have been incurred in getting the product into the market.
- Economies of scale are not expected in the future.
- The technology of production is simple so the company does not expect unit cost to fall appreciably with experience.
- The company wishes to encourage a high-quality image for their new product or services

### **Limitation of skimming pricing strategy**

However, skimming pricing strategy has the following limitations;

- It focuses on short-term profit.
- The chances of attracting rivals due to a high profit, are great.
- There may be firms waiting in the wings who believe they can produce a similar but more cheaply either because they know of some cost-saving production method or have access to the same cheap factors of the product.

### **1.6.2 Penetration Pricing Strategies**

This strategy involves setting a low entry price for a new product or brand to gain a breakthrough in a highly competitive market. Price penetration is about charging very low prices to build market share and discourage competition.

It reduced profit margins to attract customers while costs and quality remained intact. This strategy may be adopted by risk-averse businesses

Penetration pricing pursues the objective of quantity maximization using a low price. The price will usually be below the total cost, the low price aims to establish a large market share quickly by encouraging customers to try the product and then to repeat buy

### **When Is Low Entry Price Strategy Appropriate**

Low-entry pricing should be adopted only in a situation where

- The business organization is financially very strong and can survive on low-profit margins for a prolonged period.
- The basic demand for the product should be high so that economies of scale may be achieved to operate at a low price for a long time.
- The strategy is usually preferred for products that command a mass market, and the mass consumers are highly price-sensitive.
- Large decreases in cost are expected as cumulative volume increases.
- The product is of the nature of something that can gain mass appeal fairly quickly.
- There is a threat of impending competition

### **1.6.3 Other pricing strategies**

- *Loss Leader*; a loss leader is an item you sell at or below cost in order to attract more customers, who will also buy high-profit items. This is a good short-term promotion technique if you have customers that purchase several items at one time.
- *Psychological pricing*; the psychological pricing strategy aims at giving the impression of a low price

- *Price differentiation*; if the market can be split into different segments, each quite separate from the others and with its own individual demand function, it is possible to sell the same product to different markets at different prices
- *Close out*; keep this pricing technique in mind when you have excess inventory. Sell the inventory at a steep discount to avoid storing or discarding it
- *Membership or trade discounting*; this is one method of segmenting customers. Attract business from profitable customer segments by giving them special prices
- *Premium pricing*; It is adopted because product is different in term of features and higher in quality than products offered by competitors

## 1.7 The Pricing Methods

In setting of the price level, managers have the opportunity to design innovative pricing models that better meet the needs of both the firm and its customers. Thus, to set the specific price level that achieves the firm's pricing objectives, managers may make use of several pricing methods. These methods include

### 1.7.1 Cost-Plus Pricing Method

Cost-plus pricing involves adding a mark-up to the total cost of the product or service, in order to obtain the selling price. The method requires first the manager to calculate the cost of the product or service, and then includes an additional amount to represent profit.

The price can be calculated by using the following formula

$$\text{Price} = (\text{AVC} + \text{AFC}) * (1 + \text{Markup \%})$$

Where

AVC = average variable cost

AFC = average fixed costs

### 1.7.2 Advantages of cost-plus pricing

The following numbers of advantages are claimed for cost-plus pricing

- It is easy to calculate, i.e. the method is simple for a manager to determine the price,
- The method requires minimal information, it is only average total cost and markup percentage is needed to determine the price
- The method is easy to administer
- It tends to stabilize markets - insulated from demand variations and competitive factors
- It insures seller against unpredictable or unexpected later costs

### 1.7.3 Limitation of cost-plus pricing

- The method provides no incentive for efficiency it does not provide any opportunity for cost reduction
- The method tends to ignore the role of consumers in determining the price of firm's product or services
- The method tends to ignore the role of competitors in the market
- The method uses of historical accounting costs rather than replacement value

- There will always be problems associated with the selection of suitable basis on which to charge fixed costs to individual products or services. Price can show great variation, depending on the apportionment basis chosen.
- The method includes sunk costs rather than just using incremental costs
- The method ignores opportunity costs when the total costs are computed
- Contractors may not focus on performance because the cost is always covered by the client

## 1.8 Demand Based approaches (The Economists' Viewpoint)

Most firms recognize that there exists a relationship between the selling price of their product or service and the demand. This relationship can often be described by an inverse, linear relationship

### 1.8.1 Price Elasticity of Demand

Product's price elasticity should be essential element in setting its price. The price elasticity of demand is an elasticity that measures the nature and percentage of the relationship between changes in quantity demanded of a good and changes in its price

Price elasticity of demand is calculated by dividing the proportionate change in quantity demanded by the proportionate change in price

The price elasticity of demand for a particular product or service can be calculated by using the following formula;

$$E_d = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}} = \frac{\Delta Q_d / Q_d}{\Delta P_d / P_d}$$

### 1.8.2 Interpretation of Price Elasticity of Demand

When the price elasticity of demand for a product or service is **inelastic** ( $|E_d| < 1$ ), the percentage change in quantity demanded is smaller than that in price. Therefore, when the price is raised, the total revenue of producers rises, and vice versa

When the price elasticity of demand for a product or service is **elastic** ( $|E_d| > 1$ ), the percentage change in quantity demanded is greater than that in price. Hence, when the price is raised, the total revenue of producers falls, and vice versa

When the price elasticity of demand for a product or service is **unit elastic** (or unitary elastic) ( $|E_d| = 1$ ), the percentage change in quantity is equal to that in price. Hence price changes no effect on total revenues.

When the price elasticity of demand for a product or service is **perfectly elastic** ( $E_d$  is undefined), any increase in the price, no matter how small, will cause demand for the product or service to drop to zero. Hence, when the price is raised, the total revenue of producers falls to zero. The demand curve is a horizontal straight line

When the price elasticity of demand for a product or service is **perfectly inelastic** ( $E_d = 0$ ), changes in the price do not affect the quantity demanded for the product or service. The demand curve is a vertical straight line; this violates the law of demand

### 1.8.3 Factors Influencing the Price Elasticity of Demand

- Availability of substitutes: the greater the number of substitute products, the greater the elasticity
- Degree of necessity or luxury: luxury products tend to have greater elasticity than necessities
- Proportion of income required by the item: products requiring a larger portion of the consumer's income tend to have greater elasticity
- Time period considered: elasticity tends to be greater over the long run because consumers have more time to adjust their behaviour to price changes.
- Permanent or temporary price change: a one-day sale will result in a different response than a permanent price decrease of the same magnitude.

### 1.8.4 Applications of Price Elasticity of Demand

The price elasticity of demand can be applied to a variety of problems in which one wants to know the expected change in quantity demanded or revenue given a contemplated change in price.

An example of how elasticity can be useful in business situations can be shown by the following equation

$$MR = P * (1+E_d)/E_d$$

Where  $MR$  is marginal revenue

$P$  is price of the product, and

$E_d$  is the own price elasticity of demand for the product

### 1.8.5 Demand Function

Before the computation of the output which maximizes the profit of the firm, the manager should develop the demand function of the firm.

It should be noted that, the price and output varies inversely, meaning when price raises the output falls, and therefore the demand curve normally slopes downward. Thus the normal demand curve has a negative slope.

Also it should be noted that, at the maximum price, the firm sells zero output and at zero price the firm sells the maximum output. This can be illustrated by the following demand curve Therefore, demand function can be written as follows;

$$P = a - bQ$$

Where;

$P$  is the price of the a product or service

$Q$  is the quantity demand

$a$  is the intercept and

$b$  is the slope of the demand curve i.e.  $b = \Delta P/\Delta Q$

### 1.8.6 Equation for the total cost function

Cost equations are derived from historical cost data. Once a cost equation has been established (using methods such as the high/low method) it can be used to estimate future costs. The cost function equation can be written as follows;

:

$$y = a + bx$$

Where:

- 'a' is the fixed cost per period (the intercept)
- 'b' is the variable cost per unit (the gradient)
- 'x' is the activity level (the independent variable)
- 'y' is the total cost = fixed cost + variable cost (the dependent variable).

### 1.8.7 Profit-Maximization by a Competitive Firm

The firm's objective is to choose that level of output that maximizes economic profit. Therefore, how the firm selects the level of output that it produces in order to maximize the economic profit. It should be remembered that, economic profit is defined as the difference between total revenue and total cost, including opportunity costs: thus;

$$\pi (Q) = TR(Q) - TC(Q). \quad (1)$$

Continuing with the equation above

$$\Delta\pi = \Delta TR - \Delta TC.$$

If the above equation is divided both sides by  $\Delta Q$ , then

$$\Delta\pi/\Delta Q = \Delta TR/\Delta Q - \Delta TC/\Delta Q \quad (2)$$

Total profit function will be differentiated and set it equal to zero.) Thus, at a maximum economic profit:

$$\Delta TR/\Delta Q - \Delta TC/\Delta Q = 0$$

$$\text{or } \Delta R/\Delta Q = \Delta C/\Delta Q$$

$$\text{i.e., } MR (Q) = MC (Q). \quad (3)$$

### 1.8.8 Limitations of the profit maximization model

The profit maximization model applied above has some limitations in practical application in the firms; some of these limitations are as follows;

- The model focuses on profit maximization rather than owners' wealth maximization; thus ignore the aim of the owners' of the firms of wealth maximization
- Most of the firms focus on the achievement of a target profit, rather the theoretical maximum profit
- It is difficult for the most of firms to determine accurate the demand functions for their products or services
- Also it is difficult to a firm to determine the accurate and reliable figure for marginal cost
- There are other factors apart from the price which affect demand, for example, the level of income of customers, and the level sales promotional, availability of substitutes