

Accounting for Financial and Managerial Decision and Control [AFMDC]

Unit 10

Pricing Decision: External Transfer

Structure

- Concepts and objectives of pricing decision
- Pricing technique
 - Full cost and variable cost pricing
 - Return on Investment (ROI) pricing
 - Activity Based Cost (ABC) pricing
 - Target pricing

After the completion of this unit, you should be able to:

- Understand the concept of pricing decision
- Describe the factors which influence the pricing decision
- Explain the objective of pricing
- Determine the price using full cost pricing, variable cost pricing, Return on Investment (ROI) pricing, Activity Based Costing (ABC) pricing and Target pricing

10.1 Concept of Pricing Decision

The assignment of a selling price to a product or service provided by the firm is pricing. It can be defined as the act of determining the price is known as pricing decision. Few examples of the price are tuition fee for education, rent for room, fee for doctor, fare for transportation, salary to executive, wages to workers etc.

How are prices set? In many cases, price becomes dominated by the customer's choice and customer behaviors. In practice, prices were set up by negotiation between the buyer and seller. Through bargaining, they would arrive at an acceptable price. So, price still remains one of the most important elements determining enterprise market share and profitability. In such, pricing is a crucial decision-making problem faced by concerned decision-maker.

10.1 Factor Influencing Pricing Decision

The pricing decisions are influenced by different factors, such as internal and external factors:

- Market competition – Perfect or monopolistic
- Production capacity utilization – full or below capacity utilization
- Cost of product and desired profit
- Enterprise's objective
- Product nature
- Products demand
- Customer's purchasing capacity
- Government guidelines

- Economical and political conditions

10.3 Objectives of Pricing

The objectives of pricing policy may be as under:

- To satisfy the various constraints of government regulation.
- To determine the price of a product or service based on relevant cost data and other information.
- To increase the growth rate of sale.
- To discourage and safeguard against the emergence of new producers in the same line.
- To maximize the share of the market.
- To charge reasonable price to keep good relation with community etc.

10.4 Methods of Pricing

An enterprise may be concerned with two types of pricing for external sales and for internal transfer between the departments of same organization under condition of decentralized condition.

- A. For sales external to the firm i.e. to its customers:
 1. Full Cost Pricing
 2. Variable Cost Pricing
 3. Return on Investment Pricing (ROI)
 4. Target Pricing
 5. Activity-based-costing Pricing (ABC)
- B. For internal transfer between departments of same organization:
 1. Market-based Transfer Pricing
 2. Full Cost Transfer Pricing
 3. Variable Cost Transfer Pricing
 4. Negotiated Pricing
 5. General-transfer-pricing Rule

In this unit, we are going to discuss pricing methods for sales external to the firm, i.e., to its customers. Regarding the pricing method for internal transfer between department of same organization, refer to the following unit 11.

For Sales External to the Firm i.e. to its Customers

i) Full Cost Pricing

In this method selling price is determined on the basis of total costs. It is also called the absorption cost or total cost pricing. It involves all costs plus a profit margin. The desired profit is added to the total cost in order to fix the selling price. In this method, all manufacturing and non-manufacturing costs are considered to determine selling price including desired profit margin based on total cost. This is perhaps the most conventional method of pricing. The equation of full cost pricing may be presented as follows:

Price = Total Cost + (Total Cost × Mark-up Percentage)

Advantages of Full Cost Pricing

- i. Ensure recovery of total cost with a reasonable rate of return to the firm.
- ii. It helps to determine the price easily in contracting industries where a price of the contract is determined by considering fixed cost.
- iii. Stability of selling price is more possible in full cost pricing method than others, which is more justifiable to customers.
- iv. It is simple and easy to understand.
- v. Estimation of demand of products not required for determining the price in full cost pricing. Instead of it a standard profit margin can be used.

Disadvantages of Full Cost Pricing

- i. All fixed costs are included in the total cost. There are different methods of apportionment and re-apportionment of fixed overhead. The total cost will depend on which apportionment method is used and the cost of different products may differ.
- ii. Demand and competition are ignored by this method by which the chances of under pricing or overpricing of the products may occur in the firm.
- iii. Selling price may be fluctuated due to the selection of volume or capacity base which is very important in full cost pricing.
- iv. The total sales revenue may be inadequate to cover the total fixed cost, when the sales demand will be less than the volume or capacity level which has been used to estimate total unit cost.

ii) Variable Cost Pricing

This method uses only variable cost as the basis for pricing. It is also referred as marginal costing or contribution method of pricing. It emphasizes the relationship between price and costs that vary directly with sales proportionately.

Under this method, management is assured that the mark-up on variable cost is adequate to cover all allocable fixed cost and provide normal return.

The pricing equation for variable cost is as follows:

Price = Total Variable Cost + (Total Variable Cost × Mark-up Percentage)

iii) Return on Investment (ROI) Pricing

Full cost pricing and variable cost pricing ignore the capital investment. But Return on Investment (ROI) pricing considers capital investment required to produce, finance and market a product or product line. ROI is the composite cost of capital of a company that takes into account the cost of both owners and borrowed capital. So, ROI based pricing is also referred as cost of capital-based pricing. It relates price not only to the short-term cost of production but also to the capital investment required for the production and distribution of the product. ROI pricing can be determined by using following steps:

Step 1:	To find out total capital employed
Step 2:	To find out total cost of the product
Step 3:	To find out mark-up percentage by using following equation : $\text{Percentage Mark-up} = \frac{\text{Capital Employed}}{\text{Total Annual Cost}} \times \text{Planned Rate of Return on Capital Employed}$
Step 4:	To determine the Selling Price on the basis of mark-up percentage (Step 3)

iv) Target Pricing

Target pricing is based on Target costing. Companies use target-costing pricing widely in the development stages of new product. Under this method, the company first uses market research to determine the price of which the new product will sale. The estimate is based on the understanding of customers perceived value for the product. In other words, companies which are going to use target costing, have to determine the price at which they can sell their product. Then they have to estimate the total cost for the product. If the total cost of the product is sufficiently low, the product may be launched. On the contrary, if the total cost is too high, the product may be unjustified.

To sum up, the process of target pricing can be shown in the following steps:

Step 1: Estimate price which target customer can pay or want to pay or wiliness to pay

Step 2: Estimate total cost

Step 3: Decision

If, Price (Step 1) > Estimated total cost (Step 2), then produce and launch the product in the market

If, Price (Step 1) < Estimated total cost (Step 2), then produce and launch the product in the market

v) Activity Based Costing (ABC) Pricing

This process is based on Activity based costing which have been developed a more refined approach for assigning overheads to product and computing product cost by Cooper and Kaplan on 1988. It is become the relationship between the overhead costs and different activities. So, in Activity based costing pricing, the overhead allocation is done on the basis of activity involved. Under Activity Based Costing system computes a product cost using the following four steps:

Step 1:	Identify the major activities that take place in the organization
Step 2:	Determine the cost driver for each major activity
Step 3:	Create a cost centre/cost pool for each major activity
Step 4:	Trace the cost of activities to the product

Step 1: Identify the Major Activities that take Place in the Organisation

To identify the major activities in the organisation is the starting point of Activity-Based Costing System. Material handling, purchasing, receiving, despatch, machining, assembly, etc. are the examples of the major activities. Some of the examples of activity are presented in table format below:

Activities	Examples
1. Machine-related	Machining Cost Centre
2. Direct Labour related	Assembly Departments
3. Various support activities	Ordering, Receiving, Material handling, Product scheduling, Packing and dispatching

Step 2: Determine the Cost Driver for each Major Activity

Cost is influenced by different factors. After identification of the major activities, those influencing factors should also be identified. The factors which determine the cost of an activity is known as ‘Cost Driver’. The behaviour of cost must be understood for appropriate identification of cost drivers.

The term cost driver can be defined as activities or transactions which are significant determinant of cost. The examples of cost drivers are number of purchase orders, number of order delivered, number of set ups and so on.

Step 3: Create a Cost Centre/Cost Pool for each Major Activity

A cost centre must be created for each activity. It is also termed as cost pool. A collection of overhead costs that are logically related to the activity and for which cost variations can be explained in a single cost driver is known as cost pool.

The examples of cost centre and cost drivers are presenting in the following ways:

Cost Pool	Cost Driver
Customer Order Processing	No. of orders No. of customers No. of orders by size No. of customer visits
Production Control	No. of engineering changes No. of machine/layout changes No. of parts operational No. of personnel No. of schedule changes Delivery performance No. of production batches No. of set-ups No. of works orders
	No. of parts No. of deliveries No. of material movement

Material Planning/Inventory Control	No. of stock discrepancies No. of shortages No. of on-time movements No. of schedule movements No. of receipts Material weight/volume
Engineering Support	No. of set-ups No. of engineering changes No. of product changes No. of production hours No. of defects No. of tool changes No. of change notices No. of breakdowns
Inspection and Quality Control	No. of inspections No. of rejects Checking frequency No. of parts No. of suppliers No. of receipts No. of product changes Batch sizes No. of customers
General Accounting	No. of suppliers/customers Frequency of despatches Frequency of deliveries No. of invoices No. of accounting reports No. of purchase/sales orders No. of payroll No. of accounting changes

Step 4: Trace the Cost of Activities to Product According to a Products Demands for Activities

The overhead cost is traced on the basis of number of cost driver demanded by the product. For example, the total ordering cost for a period is Rs. 1,00,000. The number of orders during the period is 200 times. In that case, the cost per order will be Rs. 500 (dividing Rs. 1,00,000 by 200 times). For a particular product, if the number of orders is 20 times, then the total ordering cost for the product will be Rs. 10,000 (Rs. 500 × 20 times).

The method for computing the cost under ABC outlined as follows:

Step 1:	To find out the overhead cost traced to activities
Step 2:	To determine the cost driver for each activity
Step 3:	To find out the cost driver rate

	$\text{Cost Driver Rate} = \frac{\text{Cost Traced to Activities}}{\text{Number of Cost Drivers}}$
Step 4:	To find out Overhead Cost traced to product: Overhead Cost Traced to Product = Cost Driver Rate × Number of Cost Drivers

After computing the total cost under ABC, the mark-up percentage is added and then the pricing is completed. The overhead cost should be traced on the basis of volume as well as on activity. ABC uses both volume and activity related basis. But traditional costing system uses only volume related basis. The traditional costing system ignores these differences, that is why the high-volume products are always over cost and low volume products are under cost in traditional costing system.

References

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