

CHAPTER SIX

PRICING DECISIONS

Companies are constantly making product and service pricing decision. These are strategic decision that affects the quantity produced and sold, and therefore cost and revenues. To make these decisions, managers need to understand cost behavior pattern and cost drivers. They can then evaluate demand at different prices and manage costs across the value chain and over a products life cycle to achieve profitability.

Major influences on pricing decision

How companies prices a product or a service ultimately depends on the demand and supply of it. Three influences on demand and supply are:-

- i. Customers: - customer influences price through their effect on the demand for a product or services, based on factors such as the features of a product and its quality.
- ii. Competitors: when there are competitors, knowledge of rivals' technology, plant capacity, and operating policies enables a company to estimate its competitors' costs-valuable information in setting its own prices.
- iii. Costs - costs influence prices because they affect supply. As companies supply more product the cost of producing each additional unit initially declines but then eventually increase managers who understand the cost of producing their companies product set policies that make the products attractive to customers. In computing the relevant costs for a pricing decision, the manager must consider relevant costs in all business functions of the value chain.

Costing and pricing for the short run

Short-run pricing decisions typically have a time horizon of less than a year and include decision such as (a) pricing one time only special order with no

long run implications and (b) adjusting product mix and output volume in a competitive market.

Company's short run pricing decisions need identify a sufficiently low price at which company would still make a profit and assumed that (a) company has access to extra capacity and (b) a competitor with an efficient plant and idle capacity was likely to make a low bid. However, short run pricing does not always work this way. Companies may experience strong demand for their products in the short-run, but they may have limited capacity. In these cases, companies strategically increase prices in the short run to as much as the market will bear.

In general, short run pricing decisions are responses to short-run demand and supply condition, and the relevant costs are only those costs that will change in the short run.

Costing and pricing for the long run

Long run pricing decisions have a time horizon of a year or longer and include pricing a product in a major market in which there is some see way in setting price. Two key differences affect pricing for the long run versus the short run:-

1. Costs that are often irrelevant for short run pricing decisions, such as fixed costs that cannot be changed, are generally relevant in the long run because cost can be altered in the long run.
2. Profit margins in the long run pricing decision are often set to earn a reasonable return on investment. Short run is opportunistic, prices are decreased when demand is weak and increased when demand is strong.

Long run pricing is a strategic decision desired to build long run relationship with customers based on stable and predictable prices. But to change a stable price and earn the target long run return, a company must, over the long run, know and manage its costs of supplying product to

customers. Thus, relevant costs for long run pricing decision include all future fixed and variable costs.

Long run pricing approaches

Two different approaches for pricing decision using product cost information are:-

1. Market based approach
2. Cost based/cost plus approach

1. Market based pricing

Market based pricing approach starts by management asking, given that our customers want and how our competitors will react to what we do, what price should we charge?

Companies operating in a very competitive market, for example, commodities such as steel, oil, and natural gas, use the market based pricing. An important form of market based pricing is target pricing. Target price is the estimated price for a product or service that potential customers will be willing to pay. This estimate is based on an understanding of customer's perceived value for a product or service and how competitors will price competing product or service.

Hence, target operating income is the operating income that a company wants to earn on each unit of a product or service sold and target price leads to a target cost, target cost per unit is the estimated long run cost per unit of a product or service that, when sold at the target price, enables the company to achieve the target operating income.

Thus, Target price - Target operating income = Target cost

Implementing target pricing and target costing

In developing target prices and target cost companies may require to follow the following five steps:

- Develop a product that satisfy the needs of potential customers

- Choose a target price based on customer's perceived value for the product and the price competitors charge, and target operating income per unit.
- Drive a target cost per unit by subtracting the target operating income per unit from the target price
- Perform cost analysis to analyze which aspects of a product or service to target for cost reduction.
- Perform value engineering to achieve target cost. Value engineering is a systematic evaluation of all aspect of the value chain business function with the objective of reducing cost while satisfying customers' needs. Value engineering can result in improvement in product design, change in material specification, and modification in process method. In this case, Costs can be value adding or non value adding. Value adding costs are costs that costumers perceive as adding utility or value while non value adding cost that do not add value to the product and to customers. Value engineering will focuses on eliminating non value adding cost and reduce as much as possible value adding cost without affecting quality of the product and customers satisfaction.

Example 6.1: Astel Company is a manufacturer of personal computer .Astel expects its competitors to lower prices of PC. Astels management believes that it must respond by reducing price by 20% from Br. 1000 per unit to Br.800 per unit. At this low price, Astels marketing manager forecast an increase in annual sales from 150,000 to 200,000 units. Astel management wants a 10% target operating income on sales revenue. The total production cost at the moment for 150,000 units is Br. 135 million.

Required compute

- a) The total target revenue
- b) Total target operating income
- c) Target operating income per unit

d) Current target cost per unit

Solution

a) Total target revenue = target price per unit x target annual unit sold
= Br.800 per unit x 200,000 units = Br.160,000,000

b) Total target operating income= target rate x Total target revenue
= 10% x Br.160, 000,000= Br.16, 000,000

c) Target operating income per unit= Total target operating income/
annual unit sold
= Br.16, 000,000/200,000 units =
Br.80

d) Current cost per unit= target price per unit less target operating
income per unit
= Br.800 per unit - Br.80 = Br.720

2. Cost-plus pricing

Accounting information may be used in pricing decisions, particularly where the firm is a market leader or *price-maker*. In these cases, firms may adopt **cost-plus pricing**, in which a margin is added to the total product/service cost in order to determine the selling price. In many organizations, however, prices are set by market leaders and competition requires that prices follow the market (i.e. the firms are *price-takers*). Nevertheless, even in those cases an understanding of cost helps in making management decisions about what product/services to produce, how many units to make and whether the price that exists in the market warrants the business risk involved in any decision to sell in that market. An understanding of the firm's marketing strategy is therefore, essential in using cost information for pricing decisions.

In the long term, the prices that businesses charge must cover all of its costs. If it is unable to do so, it will make losses and may not survive. For every product/service, the full cost must be calculated, to which the desired profit margin is added. Full **cost** includes an allocation to each

product/service of all the costs of the business, including producing and delivering a good or service, and all its marketing, selling, finance and administration costs.

The general formula for setting a cost based price adds a markup component to the *cost base to determine the prospective selling price*. One way to determine the markup percentage is to choose a markup to earn a target rate of return on investment.

The target rate of return on investment is the target annual operating income that an organization aims to achieve divided by invested capital (asset)

$$\text{i.e. TRR} = \frac{\text{Target operating income}}{\text{Invested capital}}$$

Therefore, Target operating income = TRR * Invested capital

Let illustrate a cost - plus pricing formula on top company. Assume top's engineers have redesigned product CD into 2CD and that top uses a 12% markup on the full unit cost of the product in developing the prospective selling price. The target product 2CD profitability for 2000 is as follows:

	Estimated amounts 200,000 units (1)	total for = (1) ÷ 200,000
Revenues	Bir 160,000,000	Bir 800
Cost of goods sold	108,000,000	540
Operating costs	<u>36,000,000</u>	<u>180</u>
Total cost of product	<u>Bir 144,000,000</u>	<u>720</u>
Operating income	<u>16,000,000</u>	<u>Bir 80</u>

Suppose that top's target rate of return on investment is 18% and 2CD's capital investment is Bir 96 million. The target annual operating income for 2CD is:

Invested capital	Bir 96,000,000
Target rate of return on investment.....	18%

Target Annual Operating income $[0.18 \times \text{Bir } 96\text{mln}] \dots \text{Bir } 17,280,000$

Target operating income per unit of 2A

$[\text{Bir } 17,280,000 \div 200,000 \text{ units}] \dots \text{Bir } 86.40$

This calculation indicates that top needs to earn a target operating income of Bir86.40 on each unit of 2A. The mark up of Bir 86.40 expressed as a percentage of the full production cost per unit of Bir720 equals 12% (Bir 86.40 $\div$ Bir 720]

Thus the prospective selling price of product 2A is Bir806.40 (Full unit cost of 2A, Bir 720 plus the markup component of 12% ($0.12 \times \text{Bir } 720 = \text{Bir } 86.40$)).