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THE INFLUENCE OF THE COSTS OVER THE DECISIONS OF PRICES ESTABLISING

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In most companies, there is ongoing conflict between managers in charge of covering costs (finance and accounting) and managers in charge of satisfying customers (marketing and sales). Accounting journals warn against prices that fail to cover full costs, while marketing journals argue that customer willingness-to-pay must be the sole driver of prices. The conflict between these views wastes company resources and leads to pricing decisions that are imperfect compromises. Profitable pricing involves an integration of costs and customer value. To achieve that integration, however, both need to let go of misleading ideas and form a common vision of what drives profitability.

Key words: decision, pricing, cost.

1. The role of costs in pricing

Costs should never determine price, but costs do play a critical role in formulating a pricing strategy. Pricing decisions are inexorably tied to decisions about sales levels, and sales involve costs of production, marketing, and administration. It is true that how much buyers will pay is unrelated to the seller's cost, but it is also true that a seller's decisions about which products to produce and in what quantities depend critically on their cost of production. The mistake that cost-plus pricers make is not that the[y] consider costs in their pricing, but that they select the quantities they will sell and the buyers they will serve before identifying the prices they can charge. They then try to impose cost-based prices that may be either more or less than what buyers will pay. In contrast, effective pricers make their decisions in exactly the opposite order. They first evaluate what buyers can be convinced to pay and only then choose quantities to produce and markets to serve.

Consequently, costs affect the prices they charge. A low-cost producer can charge lower prices and sell more because it can profitably use low prices to attract more price-sensitive buyers. A higher-cost producer, on the other hand, cannot afford to underbid low-cost producers for the patronage of more price-sensitive buyers; it must target those buyers willing to pay a premium price. Similarly, changes in costs should cause producers to change their prices, not because that changes what buyers will pay, but because it changes the quantities that the firm can profitably supply and the buyers it can profitably serve. When the cost of jet fuel rises, most airlines are not naive enough to try passing on the fuel cost through a cost-plus formula while maintaining their previous schedules. But some airlines do raise their average revenue per mile. They do so by reducing the number of flights they offer in order to fill the remaining planes with more full-fare passengers. To make room for those passengers, they eliminate or reduce some discount fares. Thus the cost increase for jet fuel affects the mix of prices offered, increasing the average price charged. However, that is the result of a strategic decision to reduce the number of flights

and change the mix of passengers served, not of an attempt to charge higher prices for the same service to the same people. Such decisions about quantities to sell and buyers to serve are an important part of pricing strategy for all firms and the most important part for many.

In this chapter, we discuss how a proper understanding of costs enables one to make those decisions correctly. First, however, a word of encouragement: Understanding costs is probably the most challenging aspect of pricing. You will probably not master these concepts on first reading this chapter. Your goal should be simply to understand the issues involved and the techniques for dealing with them. Mastery of the techniques will come with practice.

2. Determining relevant costs

One cannot price effectively without understanding costs. To understand one's costs is not simply to know their amounts. Even the least effective pricers, those who mechanically apply cost-plus formulas, know how much they spend on labor, raw materials, and overhead. Managers who really understand their costs know more than cost levels; they know how their costs will change with the changes in sales that result from pricing decisions.

Not all costs are relevant for every pricing decision. A first step in pricing is to identify the relevant costs: those that actually determine the profit impact of the pricing decision. Our purpose in this section is to set forth the guidelines for identifying the relevant costs once they are measured. In principle, identifying the relevant costs for pricing decisions is actually fairly straightforward.

They are the costs that are incremental (not average) and avoidable (not sunk).
In practice, identifying costs that meet those criteria can be difficult. Consequently, we will explain each distinction in detail and illustrate it in the context of a practical pricing problem.

3. Why Incremental Costs?

Pricing decisions affect whether a company will sell less of the product at a higher price or more of the product at a lower price. In either scenario, some costs remain the same (in total). Consequently, those costs do not affect the relative profitability of one price versus another. Only costs that rise or fall (in total) when prices change affects the relative profitability of different pricing strategies. We call these costs incremental because they represent the increment to costs (positive or negative) that results from the pricing decision.

Incremental costs are the costs associated with changes in pricing and sales. The distinction between incremental and nonincremental costs parallels closely, but not exactly, the more familiar distinction between variable and fixed costs. *Variable costs,* such as the costs of raw materials in a manufacturing process, are costs of doing business. Since pricing decisions affect the amount of business that a company does, variable costs are always incremental for pricing. In contrast, *fixed costs,* such as those for product design, advertising, and overhead, are costs of being in business. They are incremental when deciding whether a price will generate enough revenue to justify being in the business of selling a particular type of product or serving a particular type of customer. Since fixed costs are not affected by how much a company actually sells, most are not incremental when management must decide what price level to set for maximum profit. Some fixed costs, however, are incremental for pricing decisions, and they must be appropriately identified. Incremental fixed costs are those that directly result from

implementing a price change or from offering a version of the product at a different price level. For example, the fixed cost for a restaurant to print menus with new prices or for a public utility to gain regulatory approval of a rate increase would be incremental when deciding whether to make those changes. The fixed cost for an airline to advertise a new discount service or to upgrade its planes' interiors to offer a premium-priced service would be incremental when deciding whether to offer products at those price levels.

4. Why Avoidable Costs?

The hardest principle for many business decision makers to accept is that only avoidable costs are relevant for pricing. *Avoidable costs* are those that either have not yet been incurred or can be reversed. The costs of selling a product, delivering it to the customer, and replacing the sold item in inventory are avoidable, as is the rental cost of buildings and equipment that are not covered by a long-term lease. The opposite of avoidable costs are *sunk costs—those* costs that a company is irreversibly committed to bear. For example, a company's past expenditures on research and development are sunk costs since they cannot be changed regardless of any decisions made in the present. The rent on buildings and equipment within the term of a current lease is sunk, except to the extent that the firm can avoid the expense by subletting the property.

The cost of assets that a firm owns may or may not be sunk. If an asset can be sold for an amount equal to its purchase price times the percentage of its remaining useful life, then none of its cost is sunk since the cost can be entirely recovered through resale. Popular models of commercial airplanes often retain their value in this way, making avoidable the entire cost of their continued use. If an asset has no resale value, then its cost is entirely sunk even though it may have much useful life remaining. A neon sign depicting a company's corporate logo may have much useful life remaining, but its cost is entirely sunk since no other company would care to buy it. Frequently, the cost of assets is partially avoidable and partially sunk. For example, a new truck could be resold for a substantial portion of its purchase price but would lose some market value immediately after purchase. The portion of the new price that could not be recaptured is sunk and should not be considered in pricing decisions. Only depreciation of the resale value of the truck is an avoidable cost of using it.

From a practical standpoint, the easiest way to identify the avoidable cost is to recognize that it is the *future cost,* not the *historical cost,* associated with making a sale. What, for example, is the cost for an oil company to sell a gallon of gasoline at one of its company-owned stations? One might be inclined to say that it is the cost of the oil used to make the gasoline plus the cost of refining and distribution. Unfortunately, that view could lead refiners to make some costly pricing mistakes. Most oil company managers realize that the relevant cost for pricing gasoline is not the historical cost of producing a gallon of gasoline, but rather the future cost of replacing the inventory when sales are made. Even LIFO (last-in, first-out) accounting can be misleading for companies that are drawing down large inventories. To account accurately for the effect of a sale on profitability, managers need to adopt NIFO (next-in, first-out) accounting for managerial decision making.

The distinction between the historical cost of acquisition and the future cost of replacement is merely academic when supply costs are stable. It becomes very practical when costs rise or fall. When the price of crude oil rises, companies quickly raise prices, long before any gasoline made from the more expensive crude reaches the pump. Politicians and consumer advocates label this practice *price gouging,* since companies with large inventories of gasoline increase their reported profits by selling their gasoline at higher prices than they paid to produce it. So what is the real incremental cost to the company of

selling a gallon of gasoline?

Each gallon of gasoline sold requires the purchase of crude oil at the new, higher price for the company to maintain its gasoline inventory. If that price is not covered by revenue from sales of gasoline, the company suffers reduced cash flow from every sale. Even though the sales appear profitable from a historical cost standpoint, the company must add to its working capital (by borrowing money or by retaining a larger portion of its earnings) to pay the new, higher cost of crude oil. Consequently the real "cash" cost of making a sale rises immediately by an amount equal to the increase in the replacement cost of crude oil.

What happens when crude oil prices decline? If a company with large inventories held its prices high until all inventories were sold, it would be undercut by any company with smaller inventories that could profitably take advantage of the lower cost of crude oil to gain market share. The company would see its sales, profits, and cash flow decline. Again, the intelligent company bases its prices on the replacement cost, not the historical cost, of its inventory. In historical terms, it reports a loss. However, that loss corresponds to an equal reduction in the cost of replacing its inventories with cheaper crude oil. Since the company simply reduces its operating capital by the amount of the reported loss, its cash flow remains unaffected.

Unfortunately, even level-headed businesspeople often let sunk costs sneak into their decision making, resulting in pricing mistakes that squander profits.

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