Cost-oriented Pricing

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ABSTRACT

Although in practice, there are many ways of arriving at a price, these can be reduced for simplicity to two basic methods namely, cost-oriented and demand-oriented price determination. Cost-oriented pricing is typical in the real world. Accounting systems can estimate or accumulate the costs of doing particular tasks and profit – and – loss statements show very clearly that all costs should be covered. Costs provide a floor which prices cannot go (for long anywhere) and it is only logical that prices should be built on seemingly precise cost data.

Cost-oriented pricing is not as simple or full-proof as it might seem at first glance. The analytical tools presented can improve cost-oriented pricing but management judgment is still required. Price determination is a serious matter that deserves careful study. The discussion shall begin by examining how most firms, including retailers and wholesalers set oriented prices.

Key Words: pricing, cost-oriented pricing, demand-oriented pricing, mark-up, and cost-oriented pricing demand-oriented pricing mark-up average-cost method.

INTRODUCTION

Most wholesalers and retailers are determined by using the traditional mark-ups taken in those trades. The mark-up is normally the trade or functional discount allowed by the previous channel members. Using this method, the retailer or wholesaler adds a mark-up to the delivered cost of goods. The traditional mark-ups are applied rather mechanically. Some retailers or wholesalers use the same mark-up for all their goods which, if nothing else, simplifies their pricing procedure. Other retailers (and sometimes wholesalers) may take a higher mark-up on some items because of their apparent quality or their slow turnover. Or they may feel consumers will not accept the price set by using the traditional mark-ups.

PRICING BY WHOLESALERS AND RETAILERS
Considering the large number of items the average retailer and wholesaler carries, and the small sales volume of any one item, this cost-oriented mark-up approach to pricing, seems both reasonable and practical. Spending the time to determine the best price to charge every item in stock, day by day or week by week, probably would not pay for itself.

Supposing that a retailer buys an article for $1. To make a profit, the retailer obviously must sell this article for more than its cost. If the retailer adds 50 cents to the selling price of the article to cover operating costs and provide a profit, we say that he is marking up the item by 50 cents.

Mark-ups, however, generally are expressed as percentages rather than dollar amounts. And this is where the difficulty begins. Is a markup of 50 cents on a cost of $1, a markup of 50 percent? Or should the markup be computed as a percentage of the selling price - $1.50 – and therefore be 33 1/3%. A clear definition is necessary.

We will use the following definition; unless specified. Markup means a percentage of selling price. By this definition, the 50 cent markup on the $1.50 selling price is a markup of 33 1/3%.

FIGURE 1

Example of a markup chain and channel pricing

<table>
<thead>
<tr>
<th>Selling price</th>
<th>Markup</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$50.00</td>
<td>$20.00</td>
<td>$30.00</td>
</tr>
<tr>
<td>$30.00</td>
<td>40%</td>
<td>100%</td>
</tr>
<tr>
<td>$24.00</td>
<td>20%</td>
<td>60%</td>
</tr>
<tr>
<td>$22.40</td>
<td>10%</td>
<td>90%</td>
</tr>
<tr>
<td>$21.60</td>
<td>80%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Manufacturer    Wholesaler    Retailer

Cost-oriented Pricing
A markup chain can set the price structure in a whole channel. Demonstrated above is a markup on the selling price at each level of the channel. The producer’s selling price becomes the wholesaler’s cost; the wholesaler’s selling price becomes the retailer’s cost; and this cost plus a retail markup becomes the retail selling price. Each markup is expected to cover the expenses of selling and administration and to leave a profit. Figure 1 above shows how a markup might be used at each level of a channel system.

This illustration starts with a production cost (factory cost) of $21.60. In this case, the producer is taking a 10 percent markup and sells goods for $24. The markup is 10% of $24 or $2.40. The producer’s selling price now becomes the wholesaler’s cost - $24. If the wholesaler is accustomed to taking a 20% markup on selling price, the markup is $6 and the selling price becomes $30. The wholesaler’s selling price of $30 now becomes the retailer’s cost. And if the retailer is accustomed to a 40% markup, he adds $20 and the retailer’s selling price becomes $50. Some people including some retailers have associated high markups with high profits, but this is often an error. Some lines of business just have high operating costs and need high markups. In other cases, high markups may discourage sales and lead to low profits, or actually losses. Full appreciation of these ideas helps account for the spectacular success of the discounters. Why?

The fallacy of seeking high profits through high markups can be seen by an extreme example. A 90 percent markup on selling price may not be nearly as profitable as a 10% markup on selling price! This apparent paradox is easy to understand if we assume that no units are sold at the high markup, but a very large number are sold at the low one. The key is turnover. You cannot earn much if you do not sell much, regardless of the size of the markup. Nevertheless, many retailers and wholesalers seem more concerned with the size of their markup than total profit.

Not all retailers and wholesalers, however, are concerned with the traditional markups. Some are concerned with speeding turnover to increase profit, even if this means reducing the markup. They see themselves running an ongoing system that is incurring costs as a function of time and volume of goods handled. If they may be able to take a lower markup on such items and still have a higher profit at the end of the period.

An important concept here is the stock turn rate – the number of times the average inventory is sold in a given time period, such as a year. Various methods of computing stock turn rates are used, but they are all involved with how many times the average inventory is sold. If the stock turn rate is low, this may bad for profits.

At the very least, a slow stock turn will increase cost by tying up working capital. If the stock turn were 1 (once per year) rather than 5, selling goods costing $100.000 rather than $20.00 in working capital just to carry the necessary inventory.

What constitutes high or low stock turn depends on the industry. For instance, an annual rate of 1 or 2 might be expected in the retail jewellery industry, while 40 to 50 would be typical for fresh fruits and vegetables.

PRICING BY PRODUCERS

Some markups eventually become customary in a trade whether retailers and wholesalers use a common markup for all items or whether they vary their markups. Most of the channel members tend to follow a similar markup process, adding a certain percentage to the previous price. Who determines price in the first place?
The basic list price usually is determined by the channel captain and/or brander of the product – a large retailer, a large wholesaler or most often the producer. Form here on, we are concerned with the pricing approach of such firms and for convenience, we will call them “producers”.

Producers commonly use a cost-oriented approach. They may start with a dollar-cost-per-unit figure and add markup, perhaps a customary percentage, to obtain the selling price. Or they may use a rule-of-thumb formula such as: Production cost x 3 = Selling price.

Each producer usually develops rules and markups in the light of his/her own costs and objectives. Yet even the first step of selecting the appropriate cost per unit to build on, is on simple matter. So, we must discuss several approaches to see how cost-oriented price determination really works.

THE NAIVE COST-PLUS METHOD

One simple and common approach to pricing determination is the naïve cost plus method. This consists of adding a “reasonable” markup to the cost per unit. The cost per unit is found by assuming that all output has been sold during specific period, such as the past month, then taking the total cost for that period and dividing this figure by the number of units produced and sold in the same period.

If the total cost of the latest month were $5,000 for labour and materials and $5,000 for fixed overhead expenses (such as selling expenses, rent and executive salaries), then total cost would be $10,000. If the company produced 10,000 items in the previous month, the average cost was $1 a unit. To get the price, the producer decides how much profit markup per unit seems ‘reasonable’, then adds this figure to the cost per unit. If 10 cents were considered a reasonable profit for each unit (perhaps they seek a target return of $1,000 a month), the new price would be $1.10.

The chief merit of this approach is its simplicity. This is also its weakness. To see why, we will observe this firm further.

If, in the next month, only 5,000 units are produced and sold, the firm may be in trouble. Five thousand units sold at $1.10 each would yield total revenue of $5,500. The overhead would still be fixed at $5,000 and variable material and labour costs would drop in half to $2,500 for a total of $7,500. This would mean a loss of $2,000 or 40 cents a unit. The method that seemed to allow for a unit instead would cause a loss of 40 cents a unit. This is because the naïve cost-plus method does not adjust for cost variations at different levels of output.

COST-ORIENTED PRICING MUST CONSIDER VARIOUS KINDS OF COSTS

One reason the naïve cost-plus approach fails is that total cost includes a variety of costs, and each of these changes in a different way as output changes. Any method that uses costs as the basis for determining prices, must make allowances for these variations. The more realistic approach described below does so.

To fully understand this method, however, it is necessary to define and illustrate six types of costs. An understanding of the difference among these costs is important because these differences are at the root of the problem many companies have with pricing.

Total Fixed Cost is the sum of those costs that are fixed in total regardless of output level. Among these fixed costs are rent, depreciation, executive salaries, property taxes and insurance.

Cost-oriented Pricing
Cost-oriented Pricing

Such costs must be paid even if production stops temporarily. Over a period of years, fixed costs can change - the factory may be expanded or sold; new executive may be hired or fired. But in the short run, total fixed cost is set.

Total Variable Cost on the other hand, is the sum of those variable expenses that are closely related to output expenses for components, wage paid to workers, packaging material, outgoing freight and sales commissions.

At zero output, total variable cost is zero. As output increases, so do variable costs. If a dress manufacturer doubles the output of dresses in a year, the total cost of cloth would also roughly double (ignoring quantity discounts), although the cost of cloth per dress would remain about the same.

Total Cost is the sum of total fixed and total variable costs.

The rate of growth or total cost depends upon the increase in total variable cost, since total fixed cost, by definition is already set.

The pricing executive usually is more interested in is cost per unit than total cost because prices in the market place usually are quoted per unit. Costs per unit are called “average” costs and there are three types:

Average cost per unit is obtained by dividing total cost by the related quantity (i.e. the total quantity produced that led to the total costs).

Average fixed cost is obtained by dividing total variable cost by the related quantity. We commonly assume that average variable cost is constant per unit over a short production range – to simplify analysis. Actually, average variable cost usually decreases as a firm gains some economies of scale, levels out for a while, and then begins to rise again at still higher levels of output.

THE AVERAGE-COST METHOD

Some pricing executives use is average cost-curve pricing – i.e. they set process using an average-cost curve. Assuming that the average-cost curve includes a provision for a profit (either a fixed total amount included in total fixed cost or a fixed amount per unit included in average variable cost), all the executive has to do is decide how many units the firm is going to sell. If he plans to sell 80,000 units, the price suggested by the average-cost curve would be $1.18.

Those using this approach often estimate the quantity to be sold by assuming that next period’s sales will approximate the volume of the last period.

Assuming that the firm will sell a quantity similar to past sales, the average-cost method works easily. The “average-cost” price is found along the AC curve at that precious quantity. This seems to assure that all the fixed costs will be covered. The fixed costs covered by each unit are easily calculated. And it is an easy step to develop pricing formula to ensure that on each item, that amount of fixed cost is covered.

As long as actual sales do not vary too much from the previous period, the average-cost approach will produce fairly good results. As with the naïve approach, however, loses may result if actual sales are much lower than in the previous period. On the other hand, if sales are much higher than expected and if the demand curve has shifted substantially to the right- then profits may be good but by accident.

If a firm is to base its pricing on cost, it must make some estimate of the quantity to be sold in the coming period. But unless this estimated quantity is related to price – that is, unless demand is considered – the quantity is related to price – that is, unless demand is considered, the
the pricing executive may set a price that either does not maximize profits or worse, does not even cover total costs.

THE TARGET RETURN METHOD

Target return pricing seeking a target return objective, has become popular in recent years. With this approach, the price it seeks to obtain is:

1. a percentage return (say 10 percent per year) on the investment, or
2. a specific total dollar return.

The method is basically the same as the average-cost method, since the desired target return is added into total cost. An example illustrates the method: 12,000 units were sold last year and it is hoped the same quantity will be sold this year. Executive salaries, general administrative overhead and other fixed expenses total $60,000. Total investment is $30,000. Target return is a 10% return investment or $30,000.

Therefore, total fixed cost-including the 10% target return is $630,000.

This total, divided by 12,000 units, yields a fixed cost and target return per unit figure of $52.50. If the variable cost per unit is $40, the price apparently supposed to be set to bring a 10 percent return on investment is $92.50 i.e. $52.50 plus $40.00 = $92.50.

This approach suffers from the same deficiency as the average-cost approach. If the quantity that actually is sold in a given period is less than the quantity used in setting the price, then the target return is not achieved, even though it seems to be an integral part of the price structure.
THE LONG-RUN TARGET RETURN METHOD

Executives in some larger firms, wanting to achieve long-run target return objectives, have adopted another cost-oriented pricing approach called “long run target return pricing.” Instead of estimating the quantity they expect to produce in any one year, they assume that during several years’ time, their plants will produce at, say 80 percent of capacity. They use that quantity in their pricing.

No reference at all is made to current demand when setting current prices. Demand was estimated when the plant was built. Some demand and cost factors had to be considered at that time and in reality, it was the decision to build a plant of a certain size that determined subsequent target return prices.

Companies taking this “longer-run view,” assume that there will be recession in years when sales drop below 80 percent of capacity, and the target return will not be earned, but also there will be other years when the plant operates at a higher level and betters the target return. Over the long-run, the target return will be achieved.

This “long-run approach” to target return pricing, sounds simple. But like pricing in general, it cannot be approached mechanically. For example, “capacity” is a rather flexible concept, perhaps referring to a five-day, single-shift operation or to a seven-day three-shift operation.

Long run target return pricing, consequently need not lead to a unique price or a stable price. Typically, however, companies using long-run target return pricing, tend to have more stable price.

BID PRICING RELIES ON COSTS

Many firms must set prices for each particular job, rather than developing a price structure which applies for all potential customers. Contractors, for example, bid on possible projects, and architects and engineers submit bids for jobs they would like to have.

The major task in bid pricing is assembling all the costs, including the variable costs and the fixed costs that should apply to each job. This may sound relatively straightforward, but in actual practice, thousands of cost components may have to go into a complicated bid. Further, management must include an overhead charge and a charge for profit. This is where competition must be considered. Typically, the customer will obtain several bids and accept the lowest one.

Bidding can be an expensive process and a firm might want to be selective about which jobs it will bid on – presumably selecting those where they feel they have the greatest chance of success. Thousands or even millions of dollars have been spent just developing cost-oriented bids for large industrial or government orders.

SOME PRICE SETTERS ADJUST FOR DEMAND

Cost-oriented pricing is relatively simple and practical. But it is also clear that most cost-oriented approaches require some estimate of the likely quantity demanded. And as we have seen, estimating the demand curve might help avoid mistakes in pricing.

Explicit use of demand curves is not very in the real world. Yet we do find marketers setting prices as though they believe certain types of demand curves are present. And pricing
research indicates they are. It is clear that some prestige, odd-even and psychological pricing efforts do consider demand. And some retailers do adjust their markups in the light of their feelings about demand.

The following sections discuss various examples of demand-related pricing. Some may be only intuitive adjustments of cost-based prices but it is clear that demand is being considered.

a. Prestige pricing

To some target customers, relatively high prices seem to mean high quality or high status. If prices are dropped a little bit, these customers may see a bargain. But if the prices begin to appear cheap, they start worrying about quality and may stop buying.

Such a target customer, presents the marketing manager with an unusual demand curve. Instead of a normal down slope, the curve slopes down for a while, and then bends back to the left.

Marketing managers dealing with this kind of demand – such as jewellery and fur retailers and nightclub owners – typically do prestige pricing and set high prices.

b. Leader pricing

At the other extreme from prestige pricing is leader pricing. Leader pricing is commonly used to get customers into retail stores. Certain products are picked for their promotional value and priced lowly but above cost. In food stores, the leader prices are the specials that are advertised regularly to communicate an image of low prices. Large stocks of these low-priced items are sold.

The leader-priced items are bona fide bargains priced very low for the sole purpose of getting customers into the store. Leader pricing usually is restricted to well-known and widely used items that customers do not stock heavily, such as milk, butter, eggs and coffee, but on which customers recognize a bona fide price cut. The idea is to attract customers and not sell large quantities of the leaders. And to avoid hurting the firm’s own profits, it may be desirable to use items that are not directly competitive with major lines, as in the sale of bargain-priced cigarette at a gasoline station.

c. Bait pricing

Like leader pricing, it is used to attract business. But unlike leader pricing, the seller does not plan to sell much merchandise at the low price.

This procedure is commonly used in the retail furniture trade. To attract customers, an extremely low price is offered on an item that the trade considers “nailed down”. Then, once customers are in the store, the salespeople are expected to point out the disadvantages of the lower quality item and to switch customers’ attention to higher
quality and more expensive products. Customers can buy the bait-time, but only with great difficulty.
d. Odd-even pricing

Some marketers feel that consumers will react more favourably to prices ending in certain numbers, usually the odd numbers. Retail studies show that merchants do use certain processes more frequently than others – i.e. they do odd-even pricing.

For merchandise selling under $50, prices ending with 95 – such as $5.95, $6.95 and so on are common. In general, prices ending in nine are most popular followed by prices ending in five and three. For merchandise selling over $50 prices that are $1 or $2 below the even-dollar figure are the most popular.

Marketers using these prices seem to assume that they have a rather jagged demand curve; that consumers will buy less for a while as prices are lowered and then more as each “magic” price is reached.

Some managers simply feel that certain prices for some products are psychologically appealing. Between these prices are whole ranges where customers perceive prices as roughly equivalent. Price cuts in these ranges, would not increase the quantity sold. Below such a range, customers would buy more for a while, and then the quantity demanded would remain constant at lower prices.

Pricing neckties at various levels – say $2.50 and $10 – may be an attempt to price as nearly as possible to the top of such ranges. This conception of demand underlies the price-lining policy discussed below.

PRICING A FULL LINE OR A TOTAL PRODUCT

Emphasis has been and will continue to be on the problems of pricing a single item, mainly because this simplifies our discussion. But most marketing managers actually are responsible for more than one product. In fact, their product may be the whole company line.

Many companies offer a complete line (or assortment) of products and have to do full line pricing. But the correct pricing approach depends on which of two basically different strategies the firm follows. In one case, all products in the company’s line may be aimed at the same general target market, which makes it important for all prices to be somewhat related to one another.

In other cases, the different products in the line might be aimed at entirely different target markets. Here, there doesn’t have to be any relation between the various prices. A chemical manufacturer of a wide variety of organic compounds with several target markets for example, probably should price each product separately.

Examples of a full line being offered to the same target market are a TV manufacturer selling an entire line to retailers, or a forklift truck producer offering various sizes to large manufacturer or a grocery retailer with thousands of items. Here the firm considers the customers’ reaction to its full line of prices.

Usually the marketing manager attempts to price product in the line so that the prices will appear logically related and make sense to potential customers. Most customers, especially industrial customers, feel that prices should be related to cost and this must be considered in developing prices. Customers usually realize that small production runs or handling small quantities is likely to cost more. And they may be willing to pay prices for items which they know have a small market.
The marketing manager must try to recover all costs on the whole line, perhaps by pricing quite lowly on competitive items and much higher on less competitive items. But costs are not much help to the marketing manager in full-time pricing. There is no single correct way to allocate a company’s total fixed costs to each of the products. Many methods are tried in practice, but all are arbitrary. And if a certain method is carried through without regard to demand, it may lead to extremely unrealistic prices. The marketing manager should judge demand for the whole line as well as demand for each individual product in each target to avoid mistakes.

As an aid to full-line pricing, the marketing manager can assemble directly variable costs on the many items in the line for calculating a floor under which prices will not be lowered. To this can be added, a “reasonable” markup based on an assessment of the quality of the product, the strength of the demand for the product and the degree of competition. But finally, the image projected by the entire line must be evaluated.

Price lining is similar to full-line pricing, but here the focus is on how prices look at the retail level.

**a.** Price lining - is the policy of setting a few price levels for given classes or lines of merchandise and then marking all items at one of those established prices. There are no prices at the intermediate points. Exactly how does price lining work?

It would be reasonable to assume that most customers will pay between $2.50 and $10 for a necktie. In price lining, there will not be many prices in this range, there will be only a few. Ties will not be priced at $2.50, $2.65, $2.70 and so on. They will be priced in, perhaps three levels at $2.50, $5 and $10.

The main advantage of price lining is simplicity – for both clerks and customers it lessens the confusion caused by multiplicity of prices. Some customers may consider goods in only one price category. The major decision then becomes which item to choose at that price. Price no longer is a question unless the goods at that price are unsatisfactory. Then, perhaps the sales clerk can trade the customer up to the next price level.

**b.** Demand – backward pricing is commonly used by producers of final consumer goods, especially shopping goods, such as women’s and children’s clothing and shoes and other things like toys or gifts for which customers will spend a specific amount because they are seeking a two-dollar or a five-dollar gift. Here, a sort of reverse cost-plus pricing process is used, inspired by the availability of demand at various price levels. This process has been called “market-minus” pricing.

The producer starts with the retail price for a particular line and then works backwards, subtracting the typical margins that channel members expect. This gives the approximate price that should be charged. Then, he deducts from this price the average or planned marketing expenses to determine the allocation for the production cost of each item. The quality of the product-offered at this price depends on the nature of the cost structure and the expected sales volume.
CONCLUSION

In this article, we considered various methods of cost-oriented price determination. Generally, retailers and wholesalers use traditional markups that they feel will yield a reasonable rate of profit. Some retailers and wholesalers use the same markup on all their items; others have found that varying their markups may increase turnover and profit. And demand may enter implicitly! Cost-oriented pricing seems to make sense for retailers and wholesalers because they handle small quantities of many items. Perhaps they are not maximizing profit on each item, but the extra cost of more analysis might actually reduce total profit.

We found that it is less desirable for a producer or channel captain to use traditional markups. A common alternative, the naïve cost-plus approach, ignores demand completely and is not the answer. A more realistic cost-plus approach using average-cost curves requires some forecast of sales. Such a forecast often amounts to assuming that sales in the next period will be roughly the same as in the last period.

Given such an assumption, the average-cost pricing method enables the pricing executive to determine a price. But this price may or not cover all costs and yield the desired rate of profit. It depends on how close previous sales are to actual sales. If sales decline, profits may take a nosedive.

Cost-oriented pricing frequently yields a price that is “too high”. This causes slow turnover and low profit or even loses. The first concern of too many price settlers is an “adequate” margin. They do not like to take the risk of lowering prices in anticipating of increased sales and possibly greater profits. Their reluctance results from both their cost-orientation and an absence of demand analysis.

It has become almost axiomatic in that the customer is considered before anything is done. This article certainly applies to pricing. It means that when management is setting the price, it must consider the price customers will be willing to pay. In fact, it appears that some marketers do consider demand, if only intuitively. This was seen with respect to prestige pricing, leader pricing, bait pricing, odd-even pricing, psychological pricing and full-line pricing.
REFERENCES


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