PRICING IN A SMALL FIRM

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Abstract. *A company decisions are influenced by a variety of internal and external factors. The firm's marketing objectives and costs provide a rough indication of what it should charge for its goods. But before establishing a final price, the firm also considers the level of demand, the nature of competition, and the needs of wholesalers and retailers who distribute the product to the final customer. Within this article we are going to illustrate the experience of a small Bulgarian firm "PETER COMMERCE" in the pricing of the newest product - deodorant "Bizz".*

Theory is useless unless it leads to applications. The opposite side of the coin is that real world problems are a buzzing, blooming confusion if no systematic theory puts them in some intellectual order.

As marketers, we are usually concerned with understanding the market of demand for the product or service in question. For example, consider a firm choosing a price for its new product. The manager estimates weekly sales f or different prices to be:

Weekly sales estimate	Price
500 units	$8
800 units	$6
1000 units	$4^{50}

Which price is best for the firm?

Unfortunately there are no easy answers. Deciding on a pr-ice is tricky and the stakes are high. If the company charges too much it will make .fewer sales, if it charges too little, it will sacrifice profits. But how much is just right?

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firm's marketing objectives and costs provide a rough indication of what it should charge for its goods. But before establishing a final price, the firm also considers the level of demand, the nature of competition, and the needs of wholesalers and retailers who distribute the product to the final customer.

Through their pricing tactics, companies attempt to achieve a particular return on investment, increase sales, gain market share, earn a high profit on a product, discourage competition, promote a particular image, or accomplish social or ethical goals.

Every company must translate its own particular objectives into specific prices for specific products. To do so it must first analyse its costs, since costs establish the minimum acceptable price. To survive over the long term, the company must charge a price that will cover the costs incurred in producing and selling the product.

If the marketers are to assess the likely profit consequences of alternative actions they must understand the cost associated with doing business as well. They can calculate the expected revenue generated by each pricing strategy, but without cost information- it is not possible to determine the preferred price.

This is the reason we begin by considering key cost concepts.

Two types of costs are associated with producing a product: fixed and variable costs.

Fixed costs in a company are such costs as rent, rates, manager's salaries and any other item of expense, which is not directly linked to the quantity of products produced. Total fixed costs are those costs, which do not vary with the level of output. Fixed costs per unit (average fixed cost) decline as volume increases.

Variable costs are costs, which vary because they are directly linked to the number of products produced. These include costs such as direct materials, direct labour, packaging etc.

Variable costs per unit (average variable cost) may fall because of experience in the production of the product, resulting in less scrap, more efficient use of machines, materials, etc.

The following table shows how total costs (fixed and variable) average fixed cost; average variable cost and average cost per unit can be worked out:

Table 1 (in dollars)

quantity product (Q)	total fixed costs (TFC)	total variable costs (TVC)	total costs (TC)	average fixed cost (AFC)	average variable cost (AVC)	average cost (AC)
1	2	3	4(2+3)	5(2:1)	6(3:1)	7(4:1)
0	200	–	200	∞	–	∞
1	200	40	240	200	40	240
2	200	80	280	100	40	140
3	200	120	320	66,66	40	106,66
4	200	160	360	50	40	90

You can see the total cost line in Fig. 1.

The first important feature of Fig. 1 is that the total cost line does not go through the origin, i.e. for a zero output level, total cost is not zero. Rather, total cost is OA dollars as shown by the length of the double headed arrow in Fig. 1.

As we have drawn Figure 1, total costs increase in a linear fashion with output

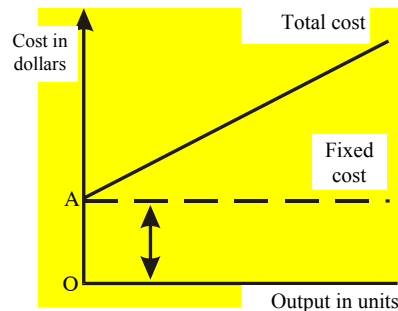produced. In reality, it is possible for the total cost curve.

Fig. 1. Total cost as function of output

The more units the company produces, the lower the cost per unit tends to be since the fixed costs are spread over a large number of units. So the firm achieves economics of scale in production, distribution and promotion. This gives companies an incentive to price their products relatively lows in order to build volume.

The firm must combine the cost information with price information to determine unit contribution and total contribution. Total contribution is the amount available to the firm to cover fixed cost and profit after the variable cost has been dedicated from total revenue.

A major goal for most companies is to reach overall profit targets. To measure their success at hitting those targets companies use return on investment (ROI) which is profit expressed as a percentage of capital investment.

The relationship between fixed and variable costs is important in a break-even analysis (BEP). It is a method of calculating the minimum volume of sales needed at a given price to cover all costs. Break even analysis enable a company to determine how many units of product it would have to sell at a given price in order to equate the total revenue and the total costs. The break-even point is the minimum sales volume that the company needs to keep from losing money. Sales above that point produce a profit, sales below that point result in a loss.

Break even analysis can be derived algebraically with this simple calculation:

Total revenues = total costs

Or: Price $\times$ quantity = total fixed costs plus total variable costs.

At a given price break even point in units (BEQ) is:

$$BEQ = \frac{\text{Total fixed costs}}{\text{The selling price per unit - variable cost per unit (unit contribution)}}$$

Or: $BEQ = \dfrac{\text{Total fixed costs}}{\text{Unit contribution}}$

While a company's costs establish a floor for prices, demand for the product establishes a selling. Theoretically, if the price for item is too high, demand falls and the

producers reduce their price to stimulate demand.

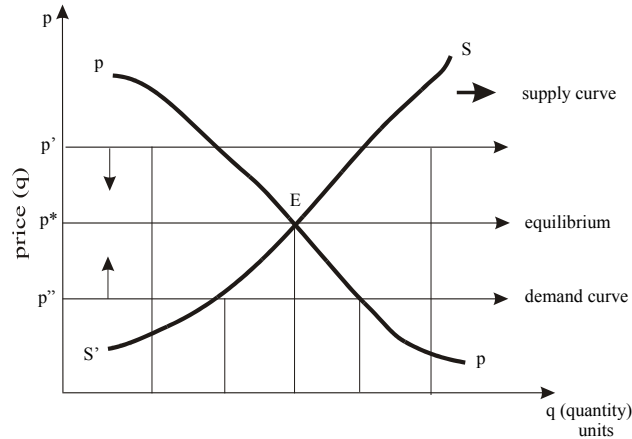Fig. 2 shows supply demand diagram.

Fig. 2. The supply demand diagram

Let's review some of the details. The horizontal axis represents the quantity (q) of some particular good. The vertical axis represents price (p) per unit. The demand curve shows the quantity that consumers want to buy at each price (p). This curve traces the amount -that consumers would purchase if the price is P dollars.

The negative slope of the demand curve reflects the fact that buyers would want to purchase more as price decreases. Similarly, the positive slope of supply curve indicates that sellers normally offer more of the good the higher the price.

In Fig. 2 market the point E where the supply and demand curves intersect represents equilibrium: the equilibrium quantity is q* and the equilibrium price is p*.

Suppose the market price were, momentarily - at a price higher than p* - for example, at p' in diagram. At that price, suppliers would want to sell quantity q_s', while consumers only want to buy the quantity q_d'. This means that some suppliers will not be able to sell as much as they want to. What will then happen? Some suppliers may find it profitable to quote a price slightly lower than that quoted by competitors, and thereby dispose of previously unsold stocks of goods. So there is downward pressure on price, is indicated in the diagram by the arrow pointing downward.

What if the market price were initially lower than p*? At p* in Figure 2 the quantity that consumers want to purchase q_d'', exceed the quantity that suppliers offer - q_s. Here there is upward pressure on price. .

Clearly, one or the other processwill always be-at work so long- as price not at the equilibrium p'. Only at p* does the quantity that consumers want to purchase match the amount suppliers want to sell.

The intersection of the demand curve and the supply curve determines the equilibrium values of price and quantity.

This equilibrium is not necessarily desirable: it is simply a prediction of what price and quantity will appear in the market.

The relationship between price and demand isn't always this clear cut, however. Some

goods are relatively insensitive to changes in price. Inelastic demands be a situation in which a percentage change in price produces a smaller percentage change in the quantity sold. Elastic demand is situation in which a percentage change in price produces a greater percentage change in the quantity sold. The price elasticity of demand is proportional change in the quantity purchased divided by the proportional change in price.

The definition of elasticity is an algebraically represented by the next ratio:

$$E_{Q_{Pd}} = \frac{\Delta Q}{Q} : \frac{\Delta p}{P}$$

$E_{Q_{Pd}}$ – price elasticity of demand;

$\Delta Q/Q$ – proportional change in the quantity;

$\Delta p/p$ – proportional change in the price

Within this article we are going to illustrate the experience of a small Bulgarian firm "Peter Commerce" in the pricing of the newest product - deodorant "Bizz".

Once a company has developed a product, it has to decide how to price it.

The calculation of the new deodorant "Bizz" includes the next costs:

A. VARIABLE COSTS	leva for unit
1. Materials:	1240
- a perfume composition	90
- a bacterial substance	30
- an ethyl alcohol	150
- an electric energy and fuels	90
- a pump, flap, box	300
- a flacon	380
2. Labour	
B. FIXED COSTS	300
TOTAL COST	540

The price of "Bizz" deodorant has been formed by the method "cost plus".

Total costs (1540 leva) plus a profit -15 percentage of the total costs (1540 × 0.15 = 233 leva) = manufacturer's price (1773 leva).

Break even point analysis is applied by the next information:

Monthly produce of deodorant "Bizz"	- 100 000 units,
Price per unit	- 1773 leva
Total fixed costs	
(100.000 unit x 300 leva)	- 30 000 thousand leva
Variable cost per unit	- 1240 leva

$$BEQ = \frac{30\,000 \text{ thousend leva}}{1733 \text{ leva} - 1240 \text{ leva}}$$

BEQ = 55866 units

55866 units must be sold monthly to cover total costs. A loss below and shows a profit above 55 866 units.

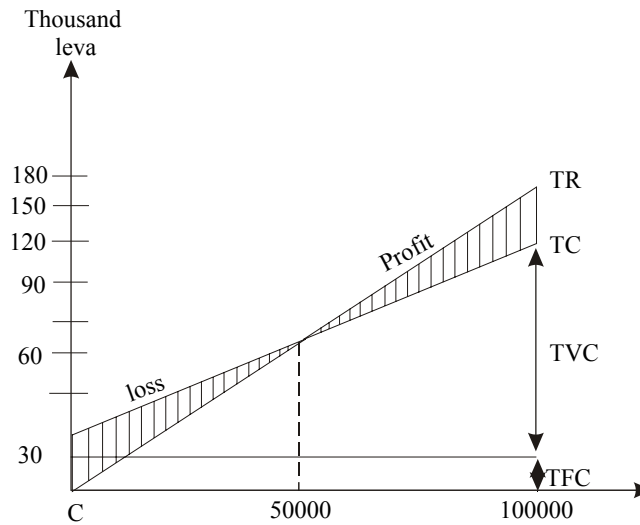The next figure illustrates break even point analysis:

Fig. 3.

The chart shows that at 1773 leva the break-even point is reached over 50 000 units (or exactly 55 866 units).

But leva 1773 isn't only pricing option. Why not charge leva 2000 instead?

When "PETER COMMERCE" charges the higher price the firm needs to give only 39 473 deodorants (30 000 thousand lv.) to break even.

2000 lv. − 1240 lv.

However the firm's manager bears in mind the competition of analogous important products. To eliminate competition a company prefers the lower price (1773 leva). Later, when the firm has established control of the market, it might then raise the price to improve its own profit.

The manager. Of "PETER COMMERCE" estimates monthly sales for different prices to be:

Monthly **sales**:   Prices:
 100 000 units   1773 leva
  70 000 units   2000 leva

The price elasticity of demand is $2\left(\dfrac{30000}{100000}:\dfrac{267}{1773}\right)$.

If the price elasticity is greater than one (elastic demand) the proportional decrease in quantity is larger than the proportional increase in price - total revenue fall when prices increases.

That is another reason "PETER COMMERCE" to charge at lower price − 1773 leva.

Especially attention is paid to the harmony between price and the distribution.

In the introductory stage of the produce life cycle the deodorant "Bizz" is distributed by indirect channel. It looks like one of the next:

Manufacturer "PETER COMMERCE"

$$\downarrow$$
Wholesaler
$$\downarrow$$
Store
$$\downarrow$$
Retailer
$$\downarrow$$
Consumer
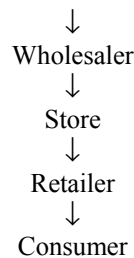
Every of the members of the channel of distribution performs functions and is compensated for it by the margin.

The producer doesn't use the fixed retailing price strategy. He can not control the retailer directly and to dictate the price conditions. But he is able to control the retailing price indirectly.

To this end the producer examines carefully the rival prices of the import and national analogies and establishes some competitive retailing price of its article. Deodorant's "Bizz" price is about 2500 leva.

So as in the introductory stage the product is unknown and the consumers are not informed about it, heavier price would make the deodorant unsmilingly.

Therefore, in the policy of "PETER COMMERCE" the method "cost plus" is in a combination with the competitive pricing.

The firm calculates the total margin for all participants in the distribution channel.

Margin = retailer's selling price − manufacturer's selling price

To consumer   to wholesaler

Margin = 2500 lv. − 1773 lv. = 727 lv.

The margin is distributed between the channel members.

To be stimulated the retailing is insured with higher percent margin. The wholesaler's margin is 10 % to the manufacturer's selling price. In case there is a store as an intermediary in the distribution channel the producer foresee 4-5 % store's margin to the wholesaler's selling price.

And so:

1. Manufacturer's selling + wholesaler's = manufacturer's
    price   margin   price to distributor

    $$1773 + 177,3\left(\frac{1773 \times 10}{100}\right) = 1950,31\,\text{lv.}$$

2. Wholesaler's selling + store's margin = wholesaler's selling
    price   price to the store

    $$1950,3 + \left(\frac{1950,3 \times 5}{100}\right) = 2047,8\,\text{lv.}$$

3. Store's selling + retailer's margin = retailer's selling
    price   price to the consumers

    $$2047,8\,\text{lv.} + \left(\frac{2047,8 \times 22}{100}\right) = 2498,3\,\text{lv.}, \text{ approximately 2500 lv. 100}$$

Fine tuning the price of product may mean the difference between success and failure

in business. Companies use a variety of techniques to optimise their pricing decisions.

With discount pricing compares offer different types of temporary price reductions. A quantity discount is offered from the firm "PETER COMMERCE" to buyers who order large quantities of a product. Theoretically, these buyers deserve a price break because they are cheaper to serve: they reduce the cost of selling, storing and shipping product and of billing customers.

The price strategy of volume discounts is used from the producers to stimulate higher margin. These discounts depend on the quantity of deodorant sales and are shown on the Table 2.

Table 2

Volumes (thousand leva)	Volume price discounts (%)
up to 1000	2
from 1001 to 3000	3
from 3001 to 5000	5
from 5001 to 7000	7
from 7001 to 10 000	9
over 10 001	10

In many industries prices tend to end in number slightly below the next dollar figure, such as $ 2.98, $ 3.96 or $ 8.79. The assumption here is that a customer sees $ 2.98 as being significantly lower than $3; thus the company will sell more at only 2 cents less. This method is known as odd pricing or psychological pricing.

Why the selling price of deodorant "Bizz" is 2498,3 leva, but not exactly 2500 leva? When people see 2498,3 they say: "That isn't 2500 leva". It's just psychological.

The firm "PETER COMMERCE" has known and used the pricing of its new products the psychological effects of the price.

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ODREĐIVANJE CENA U MALOM PREDUZEĆU

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Na proces donošenja odluka u preduzeću utiču brojni interni i eksterni faktori. Ciljevi i troškovi marketinga preduzeća nisu dovoljni indikatori u određivanju cena proizvoda. Zato pri utvrđivanju krajnje cene, preduzeće trreba da analizira i nivo tražnje, prirodu konkurencije i potrebe trgovine na veliko i malo, koja distribuira proizvod krajnjem potrošaču.

Članak ilustruje iskustvo jedne male bugarske firme "PETER COMMERCE" u određivanju cene njenog najnovijeg proizvoda - dezodoransa "Bizz".