

# PRICE STRATEGIES – A MICROECONOMIC APPROACH

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**Abstract:** *The paper aims at a microeconomic approach of the price strategies, pointing out the ratio between revenue – cost, or marginal revenue – marginal cost, in the case of different objectives proposed by the enterprise, objectives supported by certain levels of the price. The effects of implementing various price levels, with the contribution of the market through demand quantity, lead the firm to reach diverse goals: actual maximum profit; maximum turnover; an equilibrium state allowing the protection against possible competitors, but also trying to avoid loss risk; a rational resources use by the price fixed at the marginal cost level, or only the survival in difficult times.*

**Key words:** *price, cost, profit, survival.*

## 1. Introduction

Price is a strategic variable for the enterprise activity. By the decisions taken regarding price, it influences a lot of aspects:

- demand size: generally, the relation between demand quantity and price is a reverse one, the level of prices having a strong impact on sales. The intensity of the price influence on demand depends on the consumers' reply to the price change, estimated by the elasticity indicator;
- profitability: the sale price decides on the cost absorption with production and merchandising;
- positioning: a product's perception by the consumers, its image is often influenced by the price. Even if the rule is: high price lowers the demand, there are many situations when a high price suggests a quality image, and a small

price has adverse effects as it leads to the failure of consumers' trust in the product's attributes;

- competitor products comparison: price set up can change force ratio regarding market shares.

## 2. Objectives

Price set up can not be done without taking into consideration 3 major issues: demand, cost and competition. In addition, the actual concrete situation of the market and the forecast are also decisive. Theoretically, the firm is the one stating the price level on the market, and the buyers reply by a certain level of demand quantity, but there are situations when the producer is forced to comply with restrictions set by the law, by the public authority, hence limiting the variation of prices to a maximum / minimum level.

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The paper aims at a microeconomic approach of price strategies, pointing out the ratio between revenue – cost, or marginal revenue – marginal cost, in the case of different objectives proposed by the enterprise, objectives supported by certain price levels.

### 3. Material and Methods

By setting up the sale price, a firm takes into account more aspects:

- production costs: an essential element in determining the ratio between expenses due to the production process and sales revenue; the firm resorts to the marginal analysis, by comparing the unit cost or marginal cost with the sale price of the

product. In this manner, the marginal revenue/loss afferent to each additional unit produced can be estimated. The average cost and marginal cost curves intersect in the minimum point of the first one;

- demand: on the chart, the demand line expresses the inverse relation between price and demand quantity by the consumers, at each price level;
- marginal revenue: the marginal revenue ( $V_{mg}$ ) curve shape can be deduced by interpreting the results of the total revenue (VT) formula:

$$VT = p \cdot Q = f(Q) \cdot Q$$

$$V_{mg} = \frac{dVT}{dQ} = (VT)'_Q = (f(Q) \cdot Q)'_Q = f'_Q \cdot Q + f(Q) \cdot Q'_Q = f'_Q \cdot Q + f(Q)$$

$$V_{mg} = f'_Q \cdot Q + p$$

But  $p = f(Q)$  decreasing

Then  $f'_Q < 0$

$$\Rightarrow V_{mg} = p - Q \cdot |f'_Q| \quad (1)$$

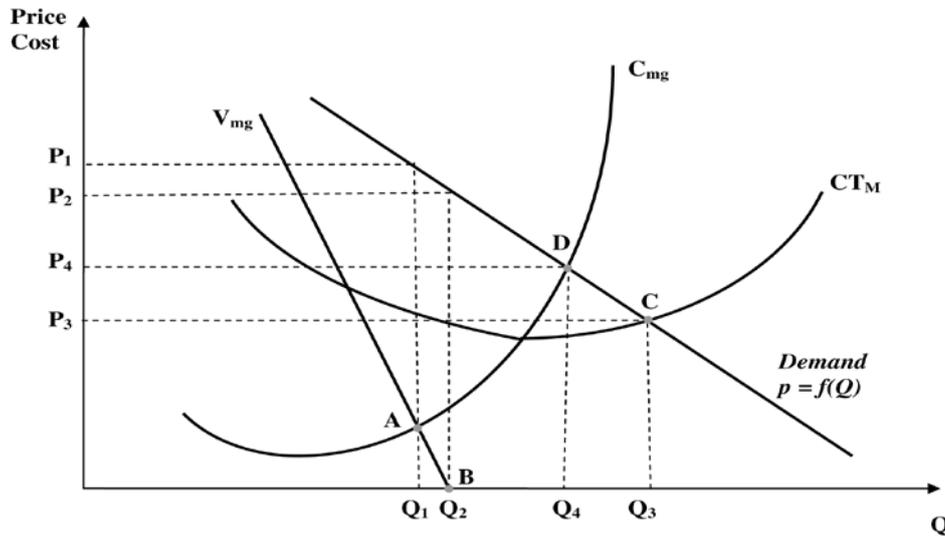


Fig. 1.  $CT_M$ ,  $C_{mg}$ ,  $V_{mg}$  curves and market demand curve, and the graphic identifying the quantity-price couples corresponding to the first four price strategies

Result interpretation:  $V_{mg}$  is a decreasing line in the coordinates system defined by: demand quantity measured on the abscissa, price/cost/revenue on the ordinate, and its shape is similar to the demand curve, with the mention that the distance between the two lines raises as the demand quantity increases.

#### Objectives envisaged by the producer, by setting up the selling price:

1. The most targeted objective is *the actual profit maximization*. Depending on the market demand and the estimated costs, the firms choose the price that allows them to obtain maximum profit.

$$\Pi = VT - CT$$

We used the notations:

$\Pi$  - profit

VT – total revenue

CT – total cost

$V_{mg}$  – marginal revenue

$C_{mg}$  – marginal cost

$$\Pi_{\max} \Leftrightarrow \frac{d(VT - CT)}{dQ} = 0 \Leftrightarrow V_{mg} - C_{mg} = 0 \Rightarrow V_{mg} = C_{mg} \Rightarrow A(Q_1, p_1) \quad (2)$$

The couple demand quantity – price is  $(Q_1, p_1)$ . The inelastic offer of the firm, whose amount is  $Q_1$ , will be confronted with the market demand, which results in

the equilibrium market price –  $p_1$ .

The current profit maximization strategy has the disadvantage of sacrificing the long term results for the benefit of the

immediate ones, and it is sometimes difficult to apply due to the legal limits regarding the price, given the competition reaction or other marketing variables.

2. *Sales turnover (total revenue)*

$$\max VT \Rightarrow \frac{dVT}{dQ} = 0 \Rightarrow V_{mg} = 0 \quad (3)$$

The required sold quantity by the firm, according to this objective, is  $Q_2$ , determined at the intersection of  $V_{mg}$  curve with the abscissa, and the price will result as the demand response to the firm offer amount.

*maximization*: this objective is aimed by the firms trying to avoid possible new competitors, being tied up with the opinion of leading to the maximum profit and market share on long term.

3. *Equilibrium state management*: this strategy can be adopted by a producer willing to protect against possible competitors, but also trying to avoid loss risk. It supposes setting up a price level allowing cost recovery, without having profit.

$$\Pi = 0 \Rightarrow VT = CT \Leftrightarrow p \cdot Q = CT_M \cdot Q \Rightarrow p = CT_M \Rightarrow C(Q_3, p_3)$$

$CT_M$  – average cost (4)

4. *The price fixed at the marginal cost level*: is a management method often practised in public managed firms. As compared to the equilibrium state management, which only removes the excess profits, this one aims at a rational

resources use, based on the real cost of the good production; a rational management implies setting up prices at the marginal cost level (particularly for the public managed firms).

$$p = C_{mg} \Rightarrow D(Q_4, p_4) \quad (5)$$

5. *Survival*: in certain situations, induced by different causes (strong competition, economic crisis, change of the consumer needs structure), the firms target a main objective: to remain on the market. The firms resort to prices cutting down, willing to get rid of the unsellable inventory, as an

alternative to the closing of business. Even if survival can not be an objective on the long term, profit becomes less important than survival during hard times, and as long as prices cover the amount of variable cost and a part of fixed cost, the firm continues to carry on the activity.

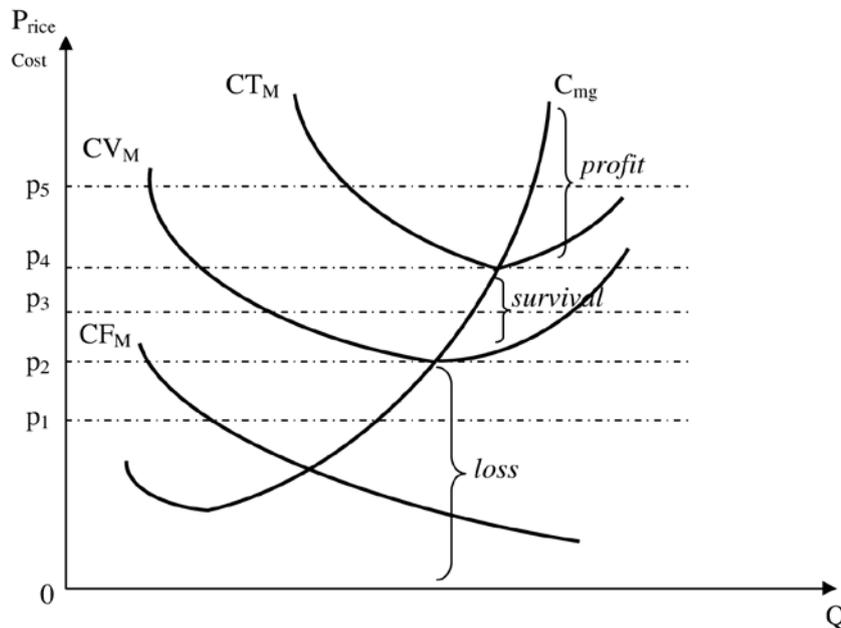


Fig. 2. Different price levels for loss/survival/profit firm situations

Fig. 2 chart registers different price levels for the marking firm position in the following situations:

- **profit:** a price level  $p_5 > p_4$  allows the complete recovery of the costs due to the production process, and leads to acquiring profit. For  $p = p_4$ , the profit is null.
- **survival:** for each price level  $p_3 \in (p_2, p_4)$ , the firm can recover all the variable costs amount, as well as a part of the fixed cost. For the firm, it is preferably to operate in this situation, otherwise the discontinuance of the business leads to the complete loss of the fixed cost value. For  $p = p_2$ , selling revenues totally cover variable costs, while fixed costs are lost. In this situation, the firm has the same results for functioning or closing.
- **loss:** for a price level below the minimum of average variable cost, the revenues do not allow to recover neither the fixed

costs, nor the variable costs. The only rational alternative for the firm is closing the business.

6. *Maximization of the sales volume:* from the economic point of view, this strategy can be applied by firms having great dimension production units, large-scale production supposes unit cost reduction, and by applying low prices, an important market share can be gained.

A low price level must be accomplished by:

- high price elasticity of demand;
- the producer should benefit from cut prices for large amounts of commodities, for big energy and fuel consumption, for the transport and distribution of a large volume of production;
- the present and potential competitors to be discouraged by low prices.

A lot of other price strategies can be applied, but these take into consideration issues such as the product image, the market state at the moment, or other

objectives specific to the firms activating in social domains (public health, education, culture, welfare).

#### **4. Conclusions**

A firm can choose to put into practice high prices, to which the market responds by a low demand (the first two strategies), or small prices, to better serve consumers (equilibrium state management and the price fixed at the marginal cost level).

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