

## **Baumol's theory of Sales Maximization**

Prof. Baumol in his book *Business Behavior, Value and Growth* (1967) has presented a managerial theory of the firm based on sales maximization. He discusses two models of sales maximization: a static model and a dynamic model. We shall analyze only his static model of sales maximization with its variants of single product model without advertisement.

### **Assumptions:**

**The model is based on the following assumptions:**

1. There is a single period time horizon of the firm.
2. The firm aims at maximizing its total sales revenue in the long run subject to a profit constraint.
3. The firm's minimum profit constraint is set competitively in terms of the current market value of its shares.
4. The firm is oligopolistic whose cost curves are U-shaped and the demand curve is downward sloping. Its total cost and revenue curves are also of the conventional type.

### **The Model:**

Baumol's findings of oligopoly firms in America reveal that they follow the sales maximization objective. According to Baumol, with the separation of ownership and control in modern corporations, managers seek prestige and higher salaries by trying to expand company sales even at the expense of profits.

Baumol cites evidence to suggest that short-run revenue maximization may be consistent with long-run profit maximization. But sales maximization is regarded as the short-run and long-run goal of the management. Sales maximization is not only a means but an end in itself.

### **Arguments in support of his theory.**

1. A firm attaches great importance to the magnitude of sales and is much concerned about declining.
2. If the sales of a firm are declining, banks, creditors and the capital market are not prepared to provide finance to it.
3. Its own distributors and dealers might stop taking interest in it.
4. Consumers might not buy its product because of its unpopularity.
5. Firm reduces its managerial and other staff with fall in sales.
6. But if firm's sales are large, there are economies of scale and the firm expands and earns large profits.
7. Salaries of workers and management also depend to a large extent on more sales and the firm gives them bonus and other facilities.

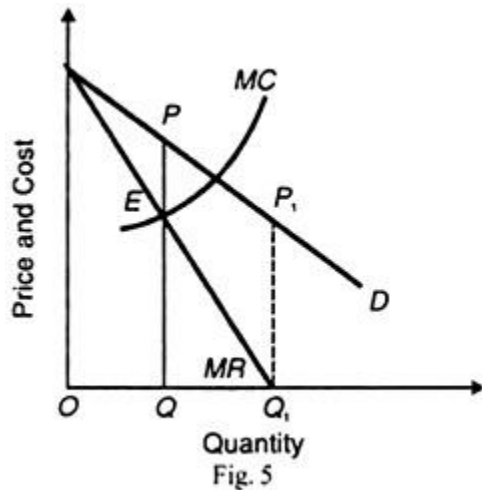
By sales maximization, Baumol means maximization of total revenue. It does not imply the sale of large quantities of output, but refers to the increase in money sales (in rupee, dollar, etc.). Sales can increase up to the point of profit maximization where the marginal cost equals marginal revenue.

If sales are increased beyond this point money sales may increase at the expense of profits. But the oligopolistic firm wants its money sales to grow even though it earns minimum profits. Minimum profits refer to the amount which is less Quantity than maximum profits. The minimum profits are determined on the basis of firm's need to maximize sales and also to sustain growth of sales.

Minimum profits are required either in the form of retained earnings or new capital from the market. The firm also needs minimum profits to finance future sales. Further, they are essential for a firm for paying dividends on share capital and for meeting other financial requirements.

Thus minimum profits serve as a constraint on the maximization of a firm's revenue. "Maximum revenue will be obtained only" according to Baumol, "at an

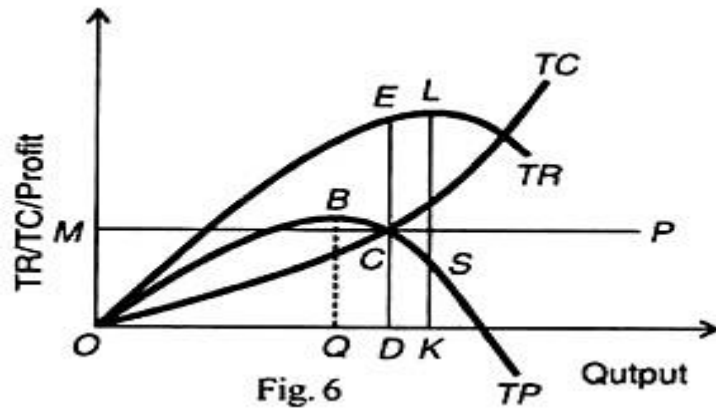
output at which the elasticity of demand is unity, i.e. at which marginal revenue is zero.



This is the condition which replaces the “**marginal cost equals marginal revenue profit maximization rule.**” This is shown in Figure 5 where the profit maximization firm produces  $OQ$  output where  $MC = MR$  at point  $E$ . But the sales maximization firm will produce  $OQ_1$  output where  $MR$  is zero.

Baumol’s model is illustrated in Figure 6 where  $TC$  is the total cost curve,  $TR$  the total revenue curve,  $TP$  the total profit curve and  $MP$  the minimum profit or profit constraint line. The firm maximizes its profits at  $OQ$  level of output corresponding to the highest point  $B$  on the  $TP$  curve.

But the aim of the firm is to maximize its sales rather than profits. Its sales maximization output is  $OK$  where the total revenue  $KL$  is the maximum at the highest point of  $TR$ .



This sales maximization output  $OK$  is higher than the profit maximization output  $OQ$ . But sales maximization is subject to minimum profit constraint. Suppose the minimum profit level of the firm is represented by the line  $MP$ .

The output  $OK$  will not maximize sales as the minimum profits  $OM$  are not being covered by total profits  $KS$ . For sales maximization the firm should produce that level of output which not only covers the minimum profits but also gives the highest total revenue consistent with it.

This level is represented by  $OD$  level of output where the minimum profits  $DC$  ( $=OM$ ) are consistent with  $DE$  amount of total revenue at the price  $DE/OD$ , (i.e., total revenue/total output). Baumol's model of sales maximization points out that the profit maximization output  $OQ$  will be smaller than the sales maximization output  $OD$ , and price higher than under sales maximization.

The reason for a lower price under sales maximization is that both total revenue and total output are equally higher while under profit maximization total output is much less as compared to total revenue. Imagine if  $QB$  is joined to  $TR$  in Figure 6. "If at the point of maximum profit", writes Baumol, "the firm earns more profit than the required minimum, it will pay the sales maximize to lower his price and increase his physical output."

