Baumol's Sales revenue Maximization theory (figure explanation)

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12 August 2020

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 maximises 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 maximise its sales rather than profits. Its sales maximisation output is OK where the total revenue KL is the maximum at the highest point of TR.
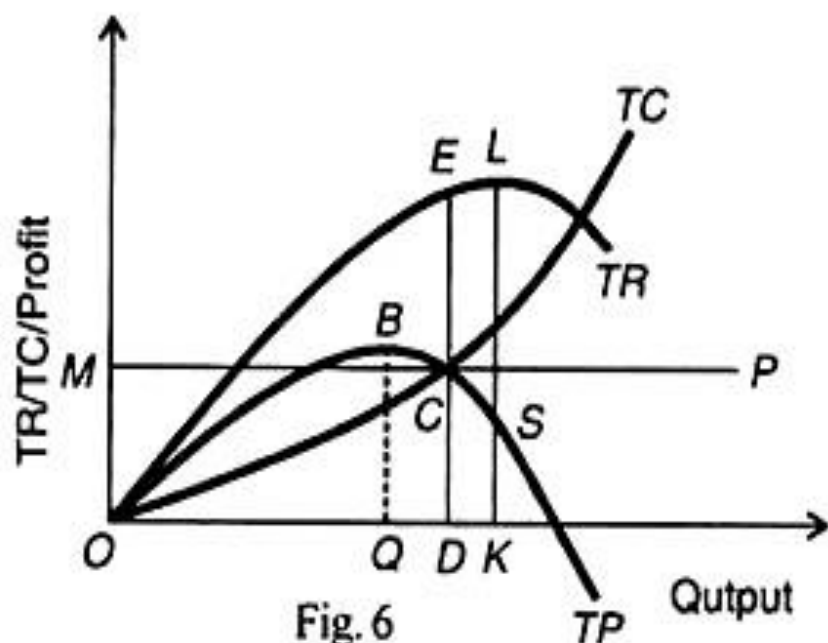
This sales maximisation output OK is higher than the

Fig. 6

profit maximisation output OQ. But sales maximisation 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 maximise sales as the minimum profits OM are not being covered by total profits KS. For sales maximisation 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 maximisation points out that the profit maximisation output OQ will be smaller than the sales maximisation output OD, and price higher than under sales maximisation.

The reason for a lower price under sales maximisation is that both total revenue and total output are equally higher while under profit maximisation 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 maximiser to lower his price and increase his physical output."

Implications or Superiority of the Model:

Baumol's sales maximisation model has some important implications which make it superior to the profit maximisation model of the firm.

(1) The sales maximiser would spend more on advertisement in order to earn larger revenue than the profit maximiser subject to the minimum profit constraint.

(2) There may be a conflict between pricing in the short-run and long-run. In the short-run, when output cannot be increased, revenue can be increased by raising the price. But in the long- run, it would in the interest of the sales maximisation firm to keep the price low in order to compete more effectively for a large share of the market to earn more revenue.

(3) The profit maximization firm is assumed to act rationally which goes against the actual behaviour of firms. On the other hand, the Baumol firm behaves satisfactorily for the purpose of earning minimum profits at a fair sales maximization output.

Criticism:

Baumol's sales maximisation model is not free from certain weaknesses.

1. Rosenberg has criticised the use of the profit constraint for sales maximisation by Baumol. Rosenberg has shown that it is difficult to specify exactly the relevant profit constraint for a firm

2. According to Shepherd, under oligopoly a firm faces a kinked demand curve and if the kink is large enough, total revenue and profits would be the maximum at the same level of output. So both the sales maximiser and the profit maximiser would not be producing different levels of output.

3. Hawkins has shown that if the firm is engaged in any form of non-price competition such as good packaging, free service, advertising, etc., Shepherd's conclusions become invalid. When the sales maximiser spends more on advertising, his output will be more than that of the profit maximiser. This is because the kink of the former's demand curve will occur to the right of the kink of the profit maximiser.

4. Hawkins has also shown that Baumols's conclusion that a sales maximiser will in general produce and advertise more than a profit maximiser, is invalid. According to Hawkins, a sales maximiser "may choose a higher, lower or identical output, and a higher, lower or identical advertising budget. It depends on the responsiveness of demand to advertising rather than price cuts."

5. In the case of multiproduct, Baumol has argued that revenue and profit maximisation yield the same results. But Williamson has shown that sale maximisation yields different results from profit maximisation.

6. Another weakness of this model is that it ignores the interdependence of the prices of oligopolistic firms.

7. The model fails to explain "observed market situations in which price are kept for considerable time periods in the range of inelastic demand."

8. The model ignores not only actual competition, but also the threat of potential competition from rival oligopolistic firms.

9. The model does not show how equilibrium in an industry, in which all firms are sales maximisers, will be attained. Baumol does not establish the relationship between the firm and industry.

10. Prof Hall in his analysis of 500 firms came to the conclusion that firms do not operate in accordance with the object of sales maximisation.

Despite these criticisms, there is no denying the fact that sales maximisation forms an important goal of firms in the present day business world.