

UNIT – II

RECENT DEVELOPMENTS IN MANAGERIAL THEORIES OF FIRMS

Baumol's Sales or Revenue Maximisation

Prof. Baumol in his book Business Behaviour, Value and Growth (1967) has presented a managerial theory of the firm based on sales maximisation. He discusses two models of sales maximisation: a static model and a dynamic model. We shall analyse only his static model of sales maximisation 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 maximising 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 maximisation 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.

Being a consultant to a number of firms, Baumol observes that when asked how their business went last year, the business managers often respond, “**Our sales were up to three million dollars**”. Thus, according to Baumol, revenue or sales maximisation rather than profit maximisation is consistent with the actual behaviour of firms.

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

He gives a number of 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.

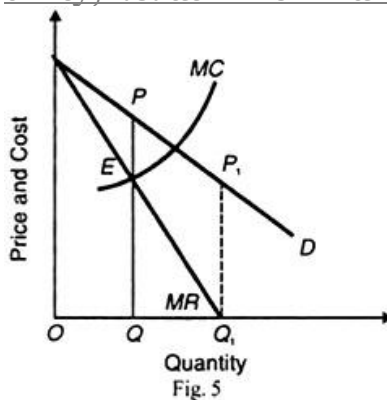
By sales maximisation, Baumol means maximisation of total revenue. It does not imply the sale of large quantities of output, but refers to the increase in money sales (in rupee, dollar, etc.). Sales can increase up to

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 maximisation 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."

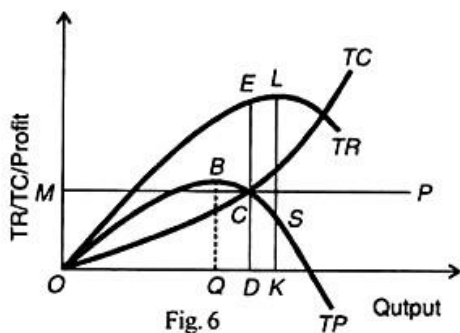


This is the condition which replaces the "marginal cost equals marginal revenue profit maximisation rule." This is shown in Figure 5 where the profit maximisation firm produces OQ output where $MC = MR$ at point E. But the sales maximisation firm will produce OQ_1 output where MR is zero.

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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 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.

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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.**”

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Criticism:

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. This is explained in Figure 7. Sales revenue of the firm is measured along the vertical axis and profit on the horizontal axis. R refers to the profit constraint. For any two combinations with profits below the constraint, the one with the larger profit will be preferred.

For instance, B on the profit level P is preferred to A at the profit level P since the line P, represents a higher level of profit. Again, of the two combinations B and C lying on the same profit line P, the one with higher sales will be preferred, i.e., C will be preferred to B. Similar is the case with points D and E on the constraint line R where E with higher sales will be preferred to D. Thus it is very difficult to choose the sales maximisation and minimum profit constraint in Baumol's model.

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 Baumol'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.

Marris Growth Maximisation:

Robin Marris in his book *The Economic Theory of 'Managerial' Capitalism* (1964) has developed a dynamic balanced growth maximising theory of the firm. He concentrates on the proposition that modern big firms are managed by managers and the shareholders are the owners who decide about the management of the firms. The managers aim at the maximisation of the growth rate of the firm and the shareholders aim at the maximisation of their dividends and share prices. To establish a link between such a growth rate and the share prices of the firm, Marris develops a balanced growth model in which the manager chooses a constant growth rate at which the firm's sales, profits, assets, etc., grow. If he chooses a higher growth rate, he will have to spend more on advertisement and on R & D in order to create more demand and new products. He will, therefore, retain a higher proportion of total profits for the expansion of the firm. Consequently, profits to be distributed to shareholders in the form of dividends will be reduced and the share prices will fall. The threat of take-over of the firm will loom large among the managers. As the managers are concerned more about their job security and growth of the firm, they will choose that growth rate which maximises the market value of shares, give satisfactory dividends to shareholders, and avoid the take-over of the firm. On the other hand, the owners (shareholders) also want balanced growth of the firm because it ensures fair return on

their capital. Thus the goals of the managers may coincide with that of owners of the firm and both try to achieve balanced growth of the firm. Criticism: Marris' growth-maximisation theory has been severely criticised for its over-simplified assumptions. 1. Marris assumes a given price structure for the firms. He, therefore, does not explain how prices of products are determined in the market. 2. It ignores the problem of oligopolistic interdependence of firms. 3 This model also does not analyse interdependence created by nonprice competition. 4. The model assumes that firms can grow continuously by creating new products. This is unrealistic because no firm can sell anything to the consumers. After all, consumers have their preferences for certain brands which also change when new products enter the market. 5. The assumption that all major variables such as profits, sales and costs increase at the same rate is highly unrealistic. 6. It is also doubtful that a firm would continue to grow at a constant rate, as assumed by Marris. The firm might grow faster now and slowly later on. Despite these criticisms, Marris' theory is an important contribution to the theory of the firm in explaining how a firm maximises its growth rate.

Williamson's Utility Maximisation:

Williamson has developed managerial utility-maximisation objective as against profit maximisation. It is one of the managerial theories and is also known as the 'managerial discretion theory'. In large modern firms, shareholders and managers are two separate groups. The former want maximum return on their investment and hence the maximisation of profits. The managers, on the other hand, have consideration other than profit maximisation in their utility functions. Thus the managers

are interested not only in their own emoluments but also in the size of their staff and expenditure on them. Thus Williamson's theory is related to the maximisation of the manager's utility which is a function of the expenditure on staff and emoluments and discretionary funds. "To the extent that pressure from the capital market and competition in the product market is imperfect, the manager, therefore, has discretion to pursue goals other than profits." The managers derive utility from a wide range of variables. For this Williamson introduces the concept of expense preferences. It means "that managers get satisfaction from using some of the firm's potential profits for unnecessary spending on items from which they personally benefit." To pursue his goal of utility maximisation, the manager directs the firm's resources in three ways: 1. The manager desires to expand his staff and to increase his salaries. "More staff is valued because they lead to the manager getting more salary, more prestige and more security." Such staff expenditures by the manager are denoted by S. 2. To maximise his utility, the manager indulges in 'featherbedding' such as pretty secretaries, company cars, too many company phones, 'perks' for employees, etc. Such expenditures are characterised as 'management slack' (M) by Williamson. 3. The manager likes to set up 'discretionary funds' for making investments to advance or promote company projects that are close to his heart. Discretionary profits or investments (D) are what remain with the manager after paying taxes and dividends to shareholders in order to retain an effective control of the firm. Thus the manager's utility function is $U = f(S, M, D)$. Where U is the utility function, S is the staff expenditure, M is the management slack and D is the discretionary investments. These decision variables (S, M, and D) yield positive utility and the firm will always choose their values subject

to the constraints, $S \leq O$, $M \leq O$ and $D \leq O$. Williamson assumes that the law of diminishing marginal utility applies so that when additions are made to each of S, M and D, they yield smaller increments of utility to the manager. To explain Williamson's utility maximisation theory diagrammatically, it is assumed for the sake of simplicity that $U = f(S, D)$. So that discretionary profits (D) are measured along the vertical axis and staff expenditures (S) on the horizontal axis in Figure 1. FC is the feasibility curve showing the combinations of D and S available to the manager. It is also known as the profit-staff curve. UU_1 and UU_2 are the indifference curves of the manager which show the combinations of D and S. To begin, as we move along the profit-staff curve from point F upward, both profits and staff expenditures increase till point P is reached. P is the profit maximisation point for the firm where SP is the maximum profit levels when OS staff expenditures are incurred. But the equilibrium of the firm takes place when the manager chooses the tangency point M where his highest possible utility function UU_2 and the feasibility curve FC touch each other. Here the manager's utility is maximised. The discretionary profits OD ($=S_1M$) are less than the profit maximisation profits SP. But the staff emoluments OS_1 are maximised. However, Williamson points out that factors like taxes, changes in business conditions, etc. by affecting the feasibility curve can shift the optimum tangency point, like M in Figure 1. Similarly, factors like changes in staff, emoluments, profits of stockholders, etc. by changing the shape of the utility function will shift the optimum position.

Criticism:

But there are some conceptual weaknesses of this model.

1. He does not clarify the basis of the derivation of his feasibility curve. In particular, he fails to indicate the constraint in the profit-staff relation, as shown by the shape of the feasibility curve.
2. He lumps together staff and manager's emoluments in the utility curve. This mixing up of non-pecuniary and pecuniary benefits of the manager makes the utility function ambiguous.
3. This model does not deal with oligopolistic interdependence and of oligopolistic rivalry.

Behavioural theory of Cyert and March:

Cyert and March have put forth a systematic behavioural theory of the firm. In a modern large multiproduct firm, ownership is separate from management. Here the firm is not considered as a single entity with a single goal of profit maximisation by the entrepreneur. Instead, Cyert and March regard the modern business firm as a group of individuals who are engaged in the decision-making process relating to its internal structure having multiple goals. They emphasise that the modern business firm is so complex that individuals within it have limited information and imperfect foresight with respect to both internal and external developments.

Organisational goals:

Cyert and March regard the modern business firm as a complex organisation in which the decision-making process should be analysed in variables that affect organisational goals, expectations and choices. They look at the firm as an organisational coalition of managers,

workers, shareholders, suppliers, customers, and so on. Looked at it from this angle, the firm can be supposed to have five different goals: production, inventory, sales, and market share and profit goals.

Implications of the Cyert-March Model for Price Behaviour:

They illustrate the key processes at work in an oligopolistic firm when it makes its decisions on price, output, costs, profits, etc. In this theory, each firm is assumed to have three sets of goals for profits, production and sales, and three basic decisions to make on price, output and sales effort in each time period. It takes into consideration the firm's environment at the beginning of each period which reflects its past experience. Its aspiration levels are modified in the light of this experience. The organisational slack is the difference between total available resources and total necessary payments to members of the coalition. Price is sensitive to factors influencing increases and decreases in the amount of organisational slack, to feasible reductions in expenditure on sales promotion and to changes in profit goals. Each firm is assumed to estimate its demand and production costs and choose its output level. If this output level does not yield the aspired level of profits, it searches for ways to reduce costs, re-estimate demand and, if required, to lower its profit goal. If the firm is prepared to lower its profit goal, it will readily reduce its price. Thus price is found to be sensitive to factors affecting costs due to the close relationship between prices, costs and profits.

Criticism:

The Cyert and March theory of the firm has been severely criticised on the following grounds:

1. Economists have questioned: 'Whether it is a theory at all? It deals with particular cases whereas a theory is expected to be a general approximation of the behaviour of firms. Its empirical base is too limited to provide the details of theorising. Hence it fails as a theory of the firm.

2. The behavioural theory relates to a duopoly firm and fails as the theory of market structures.

3. The theory does not consider either the conditions of entry or the effects on the behaviour of existing firms of a threat of potential entry by firms.

4. The behavioural theory explains the short-run behaviour of firms and ignores their long-run behaviour.

Conclusion:

Despite these criticisms, the behavioural theory of Cyert and March is an important contribution to the theory of the firm which brings into focus multiple, changing and acceptable goals in managerial decisionmaking.