


Subject: Management

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Paper 11: Managerial Economics

Module: 27 Organizational Goals-III: Managerial Theories of the firm



Principal Investigator	Prof. S P Bansal Vice Chancellor Maharaja Agrasen University, Baddi
Co-Principal Investigator	Prof Yoginder Verma Pro-Vice Chancellor Central University of Himachal Pradesh. Kangra. H.P.
Paper Coordinator	Prof. S.K. Garg Former Dean and Director, HPU, Shimla
Content Writer	Paramjeet Kaur Asst. Prof Khalsa College for Women, Ludhiana

Items	Description of Module
Subject Name	Management
Paper Name	Managerial Economics (Paper-11)
Module Title	Organisational Goals – III Managerial Theories of Firm (2)
Module Id	Module No: 27
Pre- Requisites	Basic knowledge of what organisational goals and managerial theories are.
Objectives	To study the Williamsons and other managerial theories of organisational goals
Keywords	Goals, Utility, Profit Maximisation, Sales, Revenue, Output

QUADRANT-I

Module-27: Managerial Theories of The Firm (2)
1. Learning Outcomes
2. Introduction
3. Williamson's Managerial Theory
4. Baumol's Sales Maximisation Theory
5. Kafolgis Output Maximisation Theory
6. Summary

1. LEARNING OUTCOMES

After completing this module the students will be able to:

- ❖ Know and understand Williamson's Managerial Theory
- ❖ Know and understand Baumol's Managerial Theory of Sales Maximisation
- ❖ Know and understand Kafolgis Managerial Theory of Output Maximisation
- ❖ Understand the differences between various managerial theories

2. INTRODUCTION

The theories emerged in the field of economics over time slowly went away from the assumption of profit maximization. Managerial theories visualized that the firms don't only aim at maximizing the profits, rather there are certain other considerations which the firms want to maximize.

These managerial theories and models considered that the business firms are large in size and ownership is separated from management.



The owners are the people who are shareholders of the organisation and take risks. The managers are the people who are hired to manage the affairs of the organisation. Besides Marris, many other economists suggested various managerial theories, which focused on the organisational goals other than profit maximization. Williamson stressed on the Utility Maximization goal, while Baumol focused on Sales/Revenue Maximization for managers.

3. WILLIAMSON'S MANAGERIAL THEORY OF FIRM

The theory proposed by O.E. Williamson is popularly known as 'Williamson's Utility Maximization Theory' or 'Managerial Discretion Theory'.



Economist O.E. Williamson

**PROPOUNDER OF
Williamson's Utility Maximization
Theory' or
'Managerial Discretion Theory'**

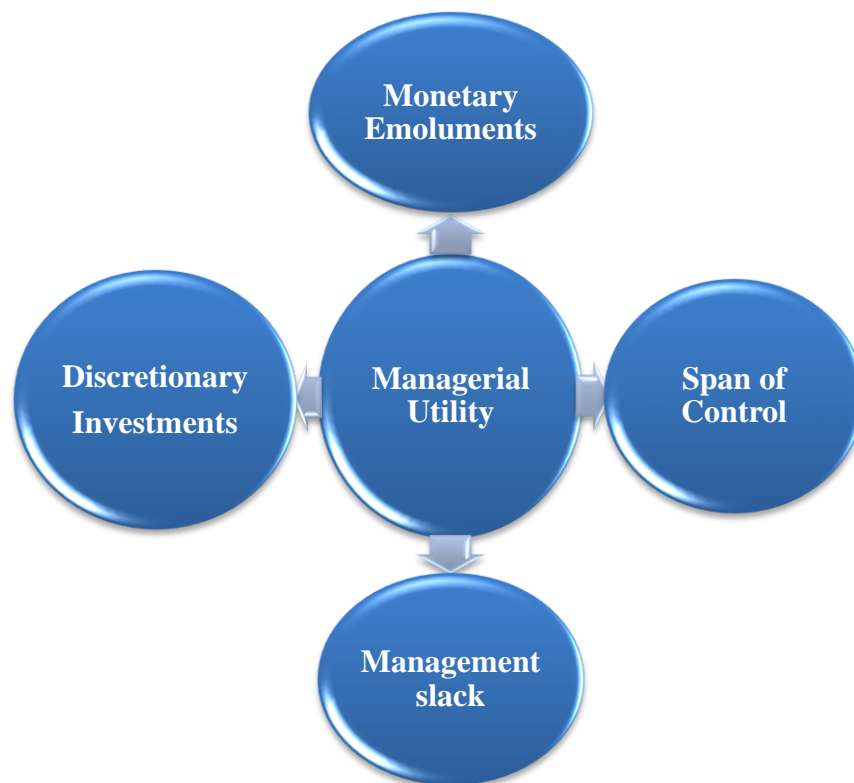
Williamson also stood against the notion of profit maximization as organisational goal and he favoured the goal of 'Utility Maximization'. This model of maximizing utility can be applied in the corporate form of business organisations, where there is divorce between ownership and management. Williamson added that in the modern times, organisations operate at large scales and the people who manage the organisations are not the owners of organisation. Thus managers and shareholders are two different groups, so their goals also differ. The shareholders aim at maximizing the returns on their investments, while managers aim at some considerations which enhance their utility function other than profit maximization. Thus shareholders survive with the objective of profit maximization, while the managers

are concerned not only with their own profits, but also with the size of the organisational staff, the amount of expenditure required for them, taxes to be paid to government and many other considerations.

Williamson further emphasized that managers are motivated by two motivators: their self interest and maximization of their own utility function. Thus he added a new dimension of utility maximization in the previously propounded managerial theories. To a large extent, utility maximization of a manager depends upon availability of after tax profits. If the after tax profits are sufficient enough to pay acceptable dividends to shareholders and to sufficiently invest in required investments (except the discretionary investments by the managers), the managers' utility maximization objective can be achieved.

3.1 Managerial Utility function

Williamson explained that the managers aim to maximize their utility function, which is further dependent upon staff, its expenditure and many other considerations. To the extent the pressure from capital market and competition in the product market is imperfect, managers has the discretion to pursue the goals other than profit maximization. The managers derive utility from a wide range of variables. The utility function of self seeking managers depends upon various factors, which are:



- i) **Monetary Emoluments:** The utility function of managers (hired by the organisation) depend the most upon salaries and other monetary emoluments which they get from the organisation. Williamson considered salary and other monetary incentives as the most crucial factor which determines managerial utility, as the amount of expenditure and standard of living of managers fully depend on monetary income. Williamson further added that monetary compensation was not the only factor that determines the utility of managers. The managers receive many other incentives and perks from the organisation, thus monetary compensation is not the only reward received that motivates manager.
- ii) **Span of control:** Another factor that influences the managerial utility is the span of control of a manager i.e. number of staff members who work under the control of a manager. The number of staff members working under a manager affects the utility attained by that manager. When a manager is assigned with the responsibility of managing greater number of staff, it is a matter of pride and prestige for him. As responsibility flows with authority, such a manger will enjoy greater power as well as greater monetary compensation and rewards. Williamson stressed that there is positive correlation between the number of staff controlled and the salary received by the manager. It is worth noting that Williamson included a single variable monetary expenditure on the staff, named as 'Staff Expenditure' (S) in his formal model of utility maximization by the manager, rather than two separate variables of salary received by the manager and number of staff members controlled by him. Every manager wants to expand his staff base and to increase his monetary earnings, as span of control enhances, it leads to increased salary, prestige and security.
- iii) **Management Slack:** Management Slack (M) is another factor that influences the managerial utility in the organisation. Managers indulge themselves in some featherbeddings to maximize their utility. The term 'management slack' includes the expenditures done in the organisation, which were not necessary for the smooth flow of organisational working. This expenditure becomes a part of cost of production in the organisations. These are non essential management perquisites and organisation could have functioned effectively and efficiently, even without such expenditures. The examples of such expenditures are the luxurious company cars, lavish offices, phone sets, employees' perks, pretty secretaries, major expenditure accounts etc.
- iv) **Discretionary Investments:** Last but not the least factor which affects the managerial utility is the magnitude of discretionary investment (D) expenditure by the manager. It deals with the limit of discretion that a manager can exercise for organisational investments. It includes the control and command that a manager enjoys over the resources of organisation. Discretionary

investments are the amount of profits left after paying taxes to government and dividends to shareholders. It helps the manager to retain an effective control over the organisation.

When a manager has much discretion i.e. he can use large resources according to own discretion, he feels more motivated and managerial utility enhances. Thus a manager can decide where to invest and he can give future directions to the organisation. Williamson clarified that the discretionary investments don't include the compulsory expenditures made in the organisation, such as expenditures on periodic replacement of assets or any other capital expenditures, which are necessary of organisational survival. Thus utility is maximized when manager has an option to use discretionary funds in the projects of his own choice.

3.2 Model of Managerial Utility Maximization

Williamson described the concept of utility of a manager in his model and he tried to maximize this utility function. The model suggested that managerial utility depends upon three variables, which are monetary expenditure on staff including salaries of managerial team, management slack and discretionary investments.

Symbolically,

$$MU = f(S, M, D)$$

Where,

MU = Manager's Utility function

S = Expenditure on Staff and Emoluments

M = Management Slack

D = Discretionary investments

It is worth mentioning that the Managerial Utility Maximization model merged two variables into a single factor (Staff Expenditure), which were:

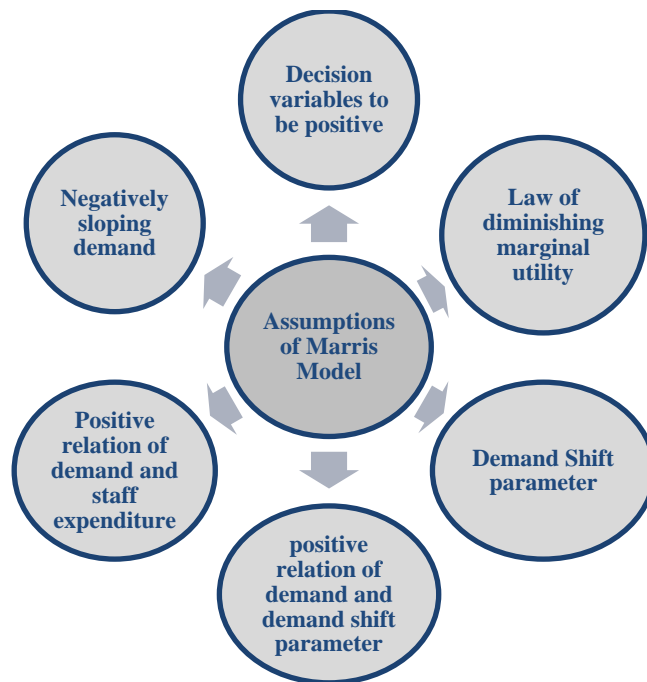
- a) Salary and other monetary compensation received by the manager and
- b) Number of staff under the control of a manager

Williamson explained that the above discussed managerial utility function must be maximized, while sufficient profits must also be available for shareholder's dividend and to pay for economically necessary investments (except discretionary investment).

3.3 Assumptions of Utility Maximization Model

Williamson based his model of Managerial Maximization Utility on the following assumptions:

- i) The three variables, on which model is based (expenditure on staff including salaries of managerial team, management slack, discretionary investment) yield positive utilities. The organisation will always choose the values of these decision variables subject to constraints, $S \geq 0$, $M \geq 0$, $D \geq 0$.
- ii) Another assumption of the model is that the law of diminishing marginal utility applies. It means when any additions are made in the three variables, the utility increments for the manager will go on decreasing.



- iii) Williamson regarded price as a function of three variables: output, expenditure on staff and state of environment (which he named as demand shift parameter).

Symbolically,

$$P = f(X, S, E)$$

Where,

P = Price function

X = Output level in a period

S = Expenditure on staff

E = Demand shift parameter

- iv) The demand function is assumed to be negatively sloping.

Symbolically,

$$\partial P / \partial X < 0$$

Thus demand of the output (X) is negatively related to Price (P).

- v) Staff Expenditure facilitates the increased demand of organisation's products.

Symbolically,

$$\partial P / \partial S > 0$$

Thus demand of the output (X) is positively related to Staff Expenditure (S).

- vi) Increase in Demand Shift Parameter would further increase the demand of organisation's product.

Symbolically,

$$\partial P / \partial E > 0$$

Thus demand of the output (X) is positively related to Demand Shift Parameter (E).

These relationships reveal that as and when the demand of organisation's product will increase, the output and expenditure on staff will also increase which will push the costs of the firm, and consequently the price will rise and vice versa.

3.4 Concepts of profits

To formalize the managerial utility maximization model, Williamson discussed four different concepts of profits in the model, which are actual profits, reported profits, minimum required profits and discretionary profits:

- a) **Actual profits:** These are the actual amount of profits attained by the organisation. These are the profits left after deducting production costs and staff expenditures from the sales revenue of the organisation.

Symbolically,

$$AP = R - C - S$$

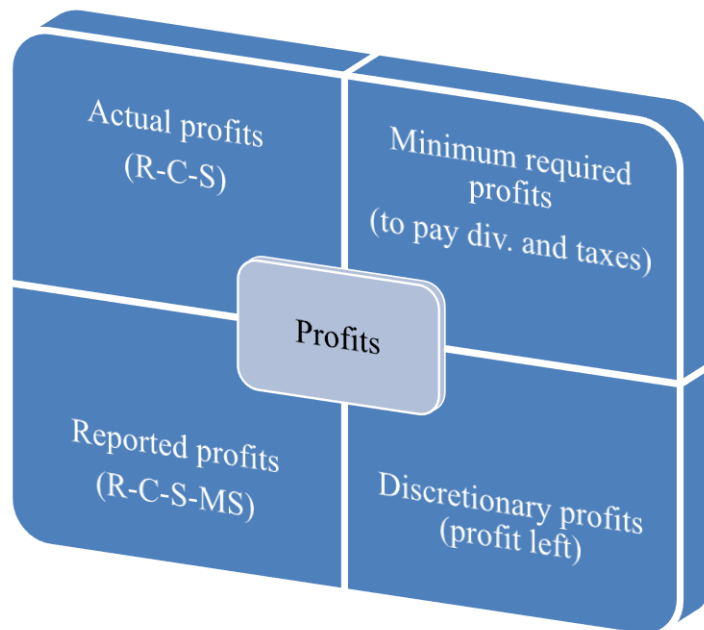
Where,

AP = Actual Profits

R = Total Sales Revenues Earned

C = Total Production Costs

S = Staff Expenditure



- b) **Reported Profits:** These are the profits which are represented as management slack by Williamson. Reported profits are calculated as follows:

Symbolically,

$$Rp = AP - MS$$

$$Rp = R - C - S - MS$$

Where,

Rp = Reported Profits

AP = Actual Profits

R = Total Sales Revenues Earned

C = Total Production Costs

S = Staff Expenditure

MS= Management Slack

Thus, Reported Profits=Actual Profits- Unnecessary Management Expenditure

- c) **Minimum Required Profits:** Minimum Profits are the amount of profits after tax, which need to be paid to shareholders as acceptable dividend. These are the lowest level of profits after paying taxes which the shareholders must receive in order to hold shares of the organisation. If the shareholders are not satisfied with the dividend amount they may switch off to some other organisations. They may sell off the shares and the firm may be in a risky position, as it may be owned by others. They may also vote against the top management and the consequences may be shocking. With this, the job security of managers may be affected. Thus managers must distribute minimum profits i.e. an optimal amount of profits as dividends to the shareholders, to safeguard their jobs. Thus reported profits must be sufficient enough to pay dividends to shareholders and taxes to government.

Symbolically,

$$R_p > MP + T$$

Where,

R_p = Reported Profits

MP = Minimum profits

T = Tax Payments

- d) **Discretionary profits:** Discretionary Profits are the profits left with the manager after paying taxes and dividends to shareholders. These profits are different from discretionary investments. Discretionary profits are the remaining profits after minimum profits and taxes are deducted from actual profits. Discretionary Investments are the difference between reported profits and minimum profits and tax.

Symbolically,

$$DP = AP - MP - T$$

Where,

DP = Discretionary profits

AP = Actual Profits

MP = Minimum Profits

T = Taxes for government

Thus,

Discretionary Investment = Reported Profits – Minimum Profits – Taxes for Government

Discretionary Profits = Discretionary Investment + Management Slack Expenditure

Note that when Management Slack is zero, Reported Profits = Actual Profits

3.5 Diagrammatic Presentation of the Model

Williamson's theory deals with the maximization of manager's utility which is a function of expenditure of staff and emoluments and discretionary investments. The diagrammatic presentation of the model has been depicted in the figure below, which provides two dimensional view of the model. For making the explanation simple, only two dimensions have been considered.

It is assumed that

$$MU = f(S, D)$$

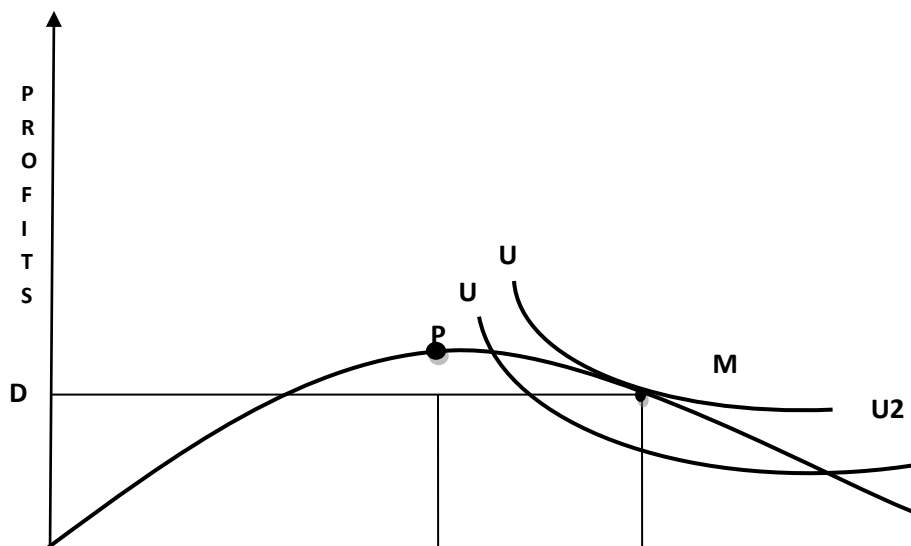
Where,

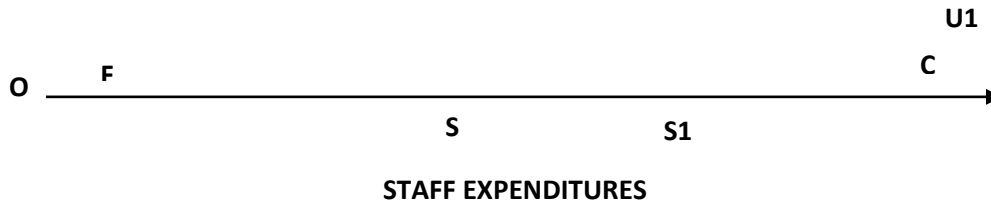
MU = manager's Utility

S = Staff Expenditure

D = Discretionary Investments

In the diagram, discretionary profits (DP) are shown and measured along the vertical axis and Staff expenditures (S) on the horizontal axis.





The combinations of discretionary investments and staff expenditure available to the manager are being depicted through FC i.e. Feasibility Curve. The curve is also known as the profit-staff curve. The diagram shows two indifference curves UU_1 and UU_2 . Both curves of the manager show the combination of discretionary investments and staff expenditure. The feasibility curve begins from F and it moves upwards. From point F upwards, both profits and staff expenditures increase till point P is reached. P is the profit maximization point for the firm. SP is the maximum profit levels when OS staff expenditures are incurred. The organisation reaches at the equilibrium point M, where a manager's highest possible utility function UU_2 touches feasibility curve FC. At this point the manager's utility reaches the maximum point. The discretionary profits $OD = S_1M$ are less than the profit maximization profits SP. But the staff emoluments OS are maximised. Williamson has further discussed that factors like taxes, changes in business conditions etc. can affect the feasibility curve, due to which it can shift the optimum tangency point, like M in the Figure. Similarly factors like changes in staff, emoluments, profits of stockholders etc. by changing the shape of the utility function may shift the optimum position.

3.6 Evaluation of the model

The Utility Maximisation model proposed by Williamson provided a realistic view, as it was based on many evidences, which proved that the model was empirically sound at the times it was proposed. The model offered many practical advantages over the previously discussed models. Baumol's model of sales maximization, was based on a single variable i.e. sales, but Williamson considered other variables as well. another positive aspect of the model was that in the model the output was higher, while the price and profits were lower than the profit maximization model. Besides all these positive points, the model suffered from the following weaknesses:

Evaluation of Williamson's Model

- Ignores the clarification on how the feasibility curve has been derived
- vague and ambiguous utility function
- two dimensional presentation of model
- does not deal with oligopolistic interdependence and of oligopolistic rivalry.

- i) Williamson has not given any clarification regarding how the feasibility curve has been derived. Further, he failed to point out the constraint in the profit-staff relation, as depicted by the shape of the feasibility curve.
- ii) The model combined together staff and manager's emoluments in the utility curve. The utility function seems to be vague and ambiguous due to mingling of non-pecuniary and pecuniary benefits of the manager. These problems emerge due to the two dimensional presentation of the model. Presentation of the model through three dimensional view may solve the problem. These difficulties can be overcome by introducing a three-dimensional diagram. But three dimensional diagrams have other complex issues.
- iii) Utility Maximisation model does not deal with oligopolistic interdependence and of oligopolistic rivalry.
- iv) According to Hawkins, most economists are reluctant to pursue Williamson's utility-maximisation theory "due to the knowledge that so many factors (e.g., profit, sales, output, growth, number of staff and expenditure on lavish offices and cars) are likely to give utility to people in industry that they shall end up with a model incapable of yielding any definite results."

Thus, Williamson proposed a different view point and argued that managers in the organisations had the discretion to adopt those policies which maximize their own utility instead of adopting those policies which maximize the profits or the utility of shareholders.

4. BAUMOL'S SALES MAXIMIZATION THEORY

A theory which had taken sales maximization as organisational goal was propounded by Prof. William Baumol. This theory is also known as Revenue Maximisation Theory. Baumol propounded this

theory based on his own experience of American oligopoly firms. He explained this managerial theory of the firm, as the firms go after sales maximization objective in the long run. As in the modern times, the ownership and management of the firms have been separated, the managers aim at maximizing their sales revenue, as it attracts more salaries and prestige for them even at the expense of large profits. In the organisations managers measure the growth in terms of their sales. Thus sales or revenue maximization rather than profit maximization is the actual goal of the firms.



Prof. William Baumol

**PROPOUNDER OF
Baumol's SalesMaximization Theory' or
'Revenue Maximisation Theory'**

According to Baumol, an organisation is always concerned about the sales level and declining sales are always a serious concern for it. A firm will not be able to raise funds from market in such situation. The distributors will not take pride in selling the products of firm and consumers may not like to buy the firm's products. The staff of the firm has to be reduced. On the other side if sales are expanding the firm may get economies of scale and the profit base will also expand. The staff will get incentives and bonuses with the increased level of sales. He further explained that revenue maximization may be a goal for short run with the profit maximization goal in long run. But the sales maximization is the long run as well as short run goal of the firms. Sales maximization is not only the means but an end in itself.

4.1 Why Sales Maximization

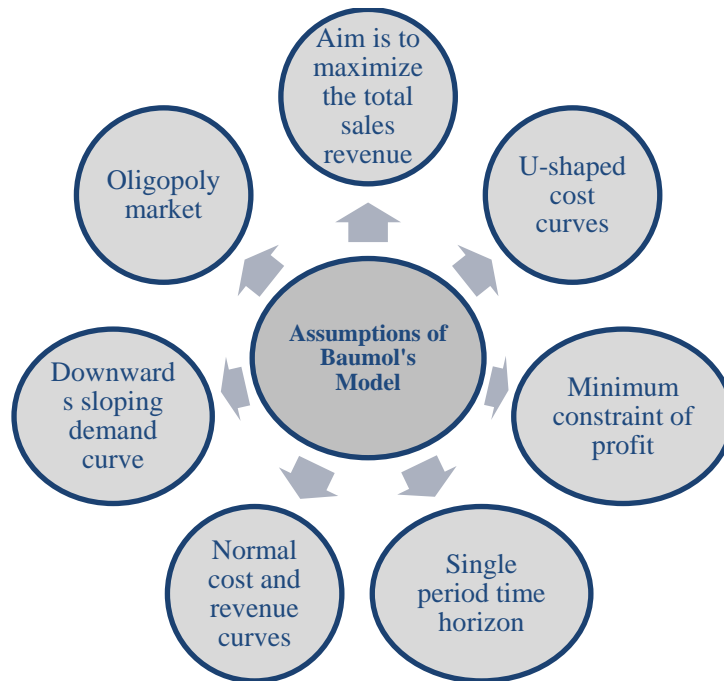
Baumol felt that maximization of sales revenue should be the sole goal of firms, because:

- i) The revenue is the only factor in the firms on which the salaries and perks of managers depend.
- ii) The status of the firms is measured in terms of the sales revenues they generate, not the profits they earn.
- iii) The future prospects of the firms in modern times are seen through its sales figures.
- iv) The image and reputation of firm in the marketplace depends largely upon its sales level.
- v) The investors look at the sales figure of firm.

- vi) The funds can be easily borrowed by maximum sales generating firms.

4.2 Assumptions of the model

Baumol's model was based on the following assumptions:

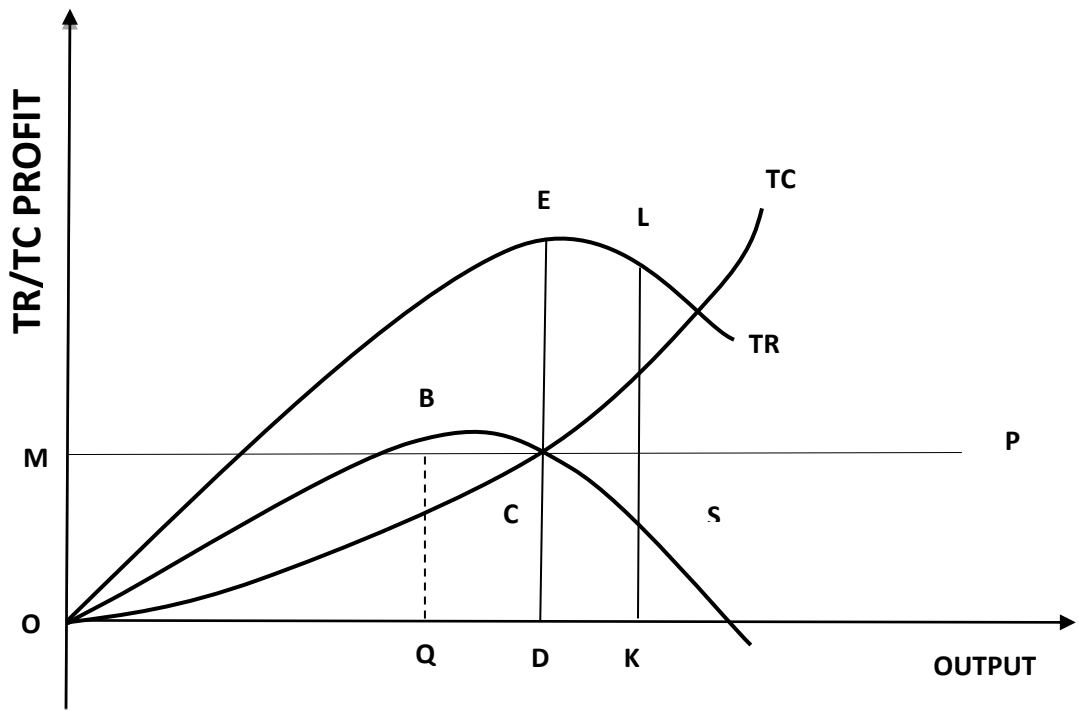


- i) The basic aim of the organisation in long run is to maximize the total sales revenue with a minimum profit constraint.
- ii) The firm sets a minimum constraint of profit, which is determined according to competition and market value of firm's shares.
- iii) The market form existing in the market is oligopoly. The cost and revenue curves are normal. The demand curve is downwards sloping and cost curves are U-shaped.
- iv) The theory is based on single period time horizon of the firm.

According to Baumol, sales maximization refers to maximization of total revenue in terms of money sales. Sales can be enhanced up to the level of profit maximization, where $MC=MR$. If sales are further increased beyond this point, such sales may increase at the expense of profits. In real life situations, oligopoly firms may want to increase the sales even at the expense of current increased profits by maintaining minimum profits.

Minimum Profits as per Baumol = Profits which are less than the maximum profits

These profits depend upon the requirements of firm. These profits are required to have retained earnings, pay dividends to shareholders, meet financial requirements and to raise new capital from market. These profits are actually a constraint on the maximization of firm's revenue. According to Baumol, profits maximization rule of $MC=MR$ has become obsolete and maximum revenue can be attained at an output level where elasticity of demand is unity.



In the figure, TC represents the total cost curve, TP is total Profit Curve, MP is the minimum profit or profit constraint and TR is the Total Revenue Curve. The profit is maximum at OQ level of output at the point B on total profit curve. But firm wants to maximize sales not profits. Output point at which sales are maximized is OK. At this point total revenue is KL which is maximum (at point L of TR curve). Thus sales maximization output is OK, while profit maximization output is OQ. But here the profit constraint needs to be considered. The firm has to take the level where minimum profits are covered. Thus the level of OK output will not provide maximum sales. OD level of output is the optimal point, where minimum profits (DC) are consistent with total revenue (DE). Thus profit maximization output is smaller than sales maximization output, while the price is higher than sales maximization. A sales revenue maximization firm will produce at a higher level of output by keeping low prices and will make investments (e.g. on advertisements) that demand of product gets increased.

Baumol's theory is not free from weaknesses and has been criticised on the following grounds:

- i) The model ignores the interdependence of the prices of oligopolistic firms.
- ii) The model ignores the impact of unforeseen rivalry competition that a firm may have to face.
- iii) Baumol has not discussed any sort of relationship between firm and industry. There is no talk about the industry equilibrium.
- iv) Rosenberg criticised that the firms would find great difficulty in specifying the relevant minimum profit constraint.
- v) According to Shepherd, under oligopoly market condition, there are kinked demand curves. When the kink stays for a long period, total revenues and profits will be maximum at the same output level.
- vi) Williamson has proved that in case of multi products, sales maximization will fetch different results than profit maximization, but Baumol argued that the results will be same.

Weaknesses in Baumol's Model

- Ignores the interdependence of the prices
- ignores the impact of unforeseen rivalry competition
- no talk about the industry equilibrium.
- Kinked demand curve may stay for long time period.
- inapplicability for multi products organisations

Despite of above discussed criticisms, the theory is practically applied in many organisations.

5. KAFOGLIS OUTPUT MAXIMISATION



Prof. Milton Kafoglis

An Advocate of Output Maximisation

Another managerial theory was suggested by Milton Kafoglis, which preferred output maximization over profit and revenue maximisation. The theory focused on the output maximization goal of firm. Kafoglis supported that in the marketplace, the performance of a firm is measured in terms of physical output, while the revenue earned is kept at the secondary place. He further explained that the firms would go after the objective of output maximization, having a minimum level of profits in hand. The firm will invest the money on increasing output level rather than on advertisements and sales promotion. The firm will aim at maximizing its output, while the sales revenue may be less than that of sales maximization firm. Critics raised the question whether a firm can survive with output maximization in long run without thinking of sales aspect. Such organisations may not be able to grow and survive in the long run. Another problem in this theory is that in case of multiproduct firms, the output of different products can't be added. Here sales maximization theory may solve the purpose.

6. SUMMARY

The managers can't altogether ignore the profits, as the survival of a business depends upon the amount of profits it generates. But there are certain other considerations which have been stressed by various theorists. O.E. Williamson supported the hypotheses of utility maximization, in which he explained that the managers aim at maximizing their utility function and this utility function depends upon staff, its expenditure, span of control, management slack and discretionary investments. Baumol emphasized on sales maximization. He suggested that modern organisations stress on maximizing the volume of sales instead of profits. He explained that the goodwill and reputation of a firm largely depends upon the level of sales a firm is able to achieve. Certain percentage of profits is needed to satisfy shareholders through dividend, to make investments, to recover costs and to grow further. Thus the managers try to maintain a pre-determined level of profit at the maximized point of sales. Kafoglis stressed on output maximization as a firm's goal rather than profit maximisation. Some economists suggested that all of these objectives are complementary rather than contradictory to each other.