CHAPTER - 2

CONCEPT AND MEASUREMENT OF PROFIT & PROFITABILITY

Profits are considered to be the heart of the industrial society in which we live. The expectation of the profit from the operation of business is the pulsating force which drives the life-sustaining blood to every part of the economic body of this life. Money keeps parts of the body of the business active and working. Life bounds in energy, when money does not flow whenever needed and in sufficient quantity, some of the parts stop functioning and may disturb the entire business operation in the industry. If there is trouble in the central pumping station(profit), though men, materials, machineries, etc. are not ready to do their jobs, lack of driving force will disrupt all the functions. In our economic life, the pumping station can not pump properly without the motive of getting profits. This profit will strengthen the ability of the enterprise in the economic life. Many communist countries like Russia may not agree with this as they do not believe in capitalism, countries with such revolutionary programs of communism shall not be considered for the study. Profit motive is not the only motive in the organisation but the most important motive especially in the capitalist countries. Profit is the motive without which the other motives can hardly function. In some cases the continuous employment depends on the profitability of the enterprise. The employers may be forced in some cases to shut down their factories, not due to the inefficiency of individual employers nor due to their heartlessness, but because the employers can not continue the production in their factories with continuous losses. Money must be obtained from somewhere to buy materials and to cover the operating expenses. A majority of human beings depend on wages, and consequently wages depend largely upon profits which are derived from business operations. An employer always takes the risk with the expectation of profits. In this connection one can state that the development of industries and the ways of making a living depend on profits. Therefore, profits determine what is to be brought and who is allowed to buy it. The products and goods can flow from one market to another, depending on their demands. The demand for the goods can not increase and be real unless it is supported by money with the people. Money can come in the hands of the people only when they get wages from their employment in the factories. The existence and continuous of the factories depends on their profitability. Profit in the capitalist economy is the most important motive and the heart of the industrial life.

DEFINITION OF PROFIT

Profit can be defined in different ways depending on the party it is to serve. Profit carries different meanings to different groups of people, i.e. enterpreneurs, economists, accountants, tax collectors, workers, academicians, society, etc. Determination of profit is an important factor to different parties as they are benefited from such a determination.

Profit has not been defined by law. Accountants also are not unanimous to the definition of profit. As Duck and Jorvis specify, "The principle motivating force behind conducting business is profit. Perhaps the most important reason for keeping accounts, as far as the management of a business is concerned, is that the information contained in them provides the means of measuring the progress of the business of testing its pulse and indicating when and where remedial action if necessary shall be taken"[1]. S.B. Chodhary writes, "Profit is the engine that drives the business enterprise"[2]. Harold and Swidt Seymour remark that profit is unalterable, permanent, and, as such, the primary as well as final objective of an enterprise. If an enterprise fails to make profits, capital invested is eroded and, if this situation continues, the enterprise may ultimately cease to exist. . Profits are the soul of business without which it is lifeless.[3]. Weston and Brigham also state that for the financial management, profits are the test of efficiency and a measure of control, to the owners, a measure of the worth of their investment, to the creditors the margin of safety, to the emloyees a source of fringe benefits, to the government a measure of taxable capacity and the basis of legislative action, to the country profits are an index of economic progress, national income generated and rise in the standard of living[4]. As pointed out by R.L.Smith "The term of profit carries a variety of meanings not only in technical sense but in interpretative sense as well"[5]. R.K. Jaimini defines

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1. Duck R.E.V and Jorvis F.R.J., Management Accounting, New York, George G. Harrap and Company Ltd., 1964, P.98.
2. Chodhary S.B., Analysis of Company Financial statement, Bombay, Asia Publishig House, 1964, P.123.
3. Harold Bierman J. and Suidt Seymour, Capital Budgeting Decisions, New York, MacMillan, 1975, PP.162-170.
4. Pred. J. Weston and E.F.Brigham, Mangerial Finance, Home Wood, Illiois : Dryden Press, 1975, PP.123-13
5. Smith R.L., Management through Accounting, Englewood Cliffs, New Jersey, Prentice Hall, 1962, P.91

"Profit as an absolute figure alone does not give an exact idea of the adequacy or otherwise of increase or of changes in efficiency as shown by the performance of an enterprise specially when the problem of historical comparison over a number of years for the same company or of horizontal comparison of a number of companies within the same industry group are confronted with the residual profit figures in absolute quantities may be confusing and difficult to interpret to variations in the size of investment and/or the volume of sales etc. It, therefore, becomes necessary to relate profit figures with the volume of sales or with the level of investment and derive quantitative relationship in the form of other ratios or percentages"[6].

L.A. Rede has defined profit in three different ways :

i) Gross profit is defined as total income minus total expenditure. In other words gross profit mainly comprise interest charges, provision for taxation, dividends and retained earnings. However, inclusion of depreciation charges depends upon the type of definition adopted for defining total capital employed. If total capital comprises the gross fixed assets, the depreciation charges are included in gross profits. (ii) Profits before tax can be defined as gross profits minus interest charges on short term loan. Thus profits before tax comprises of the interest charges on long term loans, provision for taxes, dividends and retained earning. (iii) Net profit which compries of the gross

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6. Jaimini R.K., Management of Small Scale lIndustries, Jaipur, Prateeksha Publication, 1988, P.22.

profits minus all interest charges and taxes. In other words, net profits comprise of the dividends and retained earning.

A. Singh and Whittington have defined gross profit as inclusive of the interest charges on long term loans plus taxes plus dividends and retained earnings. They have excluded interest on short term loans from the definition of gross profit because they have excluded short term laons from capital employed.[7].

G.J. Stigler defines profits as inclusive of interest payments, dividends on all types of stock, unadjusted profits excluding income taxes[8]. Economic and Scientific Research Foundation defines profits in two ways :

I) Gross profit is defined as profit before taxes i.e. after deducting all the manufacturing costs, wages and salaries, managing agency commission, interest and depreciation but before development rebate reserve and certain other provisions like doubtful debts and contingencies.

II) Net profit is defined as gross profits minus provision for taxation[9].

Profit can be defined as an excess of income over expenditure over a period of time. Profit can also be defined as an excess of assets over liabilities over a period of time. In capitalism and mixed economy the efficiency of the business is

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7. Singh A and Whittington G., Growth, Profitability and valuation, Cambridge University Press, Cambridge, 1968, PP.25-32
8. Ibid., PP.123.125
9. Economic and Scientific Research Foundation : Guide to Performance of Top 200 Companies, E.S.R.I. New Delhi, 1964, P.42.

measured by the profitability of the business. Profits are necessary for the survival of the business in the market and enable the company to pay its obligations with specific percentage of profit. Profit should not be understood as the only objective of the enterprise at each and every stage, irrespective of social attitudes. As I.M. Pandey mentiones "It is unfortunate that the word profit is looked upon as a term of abuse since some firms always act to maximize profit, at the cost of employees, customers and society"[10].

The maximization of profit is important and useful when it is accompained by social welfare, employees satisfaction and customers confidence. Profit-making is not meant for the interest of the employers but also look to the interest of other parties who will be benefited from the business operation.

There are three concepts of profits; Accounting Profit, Economic profit and Social Profit.

I. Accounting Profit :

Accounting profit is the difference between current value of sales minus historical cost of expenses plus realised capital gains, i.e. the difference between the income derived from the disposal of assets minus historical cost of depreciation during a given period.

As Y. Goldschmidt and K. Admon mention, "The accounting profit concept involves calculation of net worth from the position statement of two successive period. Accounting theory

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10. Pandey I.M., Financial Management, Sahibabad, Vikas Publishing House Pvt. Ltd. 1983, P.517.

assumes that the future earning capabilities of assets are fairly represented by their historical prices. Debt value representing external obligations is 'objectives'. The difference between assets value and debt value, net worth, is the owner's worth" [11].

Hanry Hoagland also specifies, In accounting, the word 'profit' is used almost invariably with some qualifying words or phrases. In the report of the special committee of the American Institute of Accountants, the word "Profit" is modified in thirty different ways. According to this report the term 'profit' to accountant usually means the excess of the selling price over the cost of anything [12].

Accounting profits are determined by the different accounting policies. Therefore, two similar companies with identical sales, cost structures and managerial ability may have different profits, due to the different accounting policies adopted by the management. Firstly, a company may provide depreciation on a straight line mehtod, while the second company may follow the method of diminishing balance. As a result, the profits of the two similar companies may be different. However, the following accounting matters may lead to the different profits inspite of the similarity between two companies :

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11. Goldschmidt Y and Admon K., Profit Measurement During Inflation Accounting, Economic and Financial Aspects, A Wiley Interscience Publication, 1977, P.28.
12. Henry E.Hoagland, Corporation Finance, New York, McGraw Hill Book Company Inc. 1947, P.534

1) Valuation of inventories. There are many methods for valuation of inventories such as total cost, direct cost or at works cost. Moreover, there are different mehtods for valuation of raw materials and work in progress.
2) The treatment of deferred revenue expenses such as advertisement campaign, research and development etc.
3) Method of charging depreciation.
4) Method of writing off fictitious assets and preliminary expenses.
5) Method for considering doubtful debts.
6) Capitalisation of expenditure at the time of construction of the company.

From the foregoing discussions, it can be gathered that although it is very difficult to evolve an objective definition of profit since it reflects, at the same time, quantitative and qualitative indices of the functioning of an enterprise. 'Profit' in the context of countries like India should be viewed and analysed from both quantitative and qualitative standpoints and profit and profiability in such countries is the result of various parameters[13].

To conclude, we can say, different institutions for different purposes have defined profit but most of the above definitions indicate that the profits can be defined in three ways.

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13. Chatterjee S.R., Profitability, A potential Yardstick of Performance Appraisal, Indian Journal of Commerce, Nov.1969, P.23.

i) **Gross Profits** : Gross profits are defined as the total revenues minus all kinds of expenditures which are directly related to the production, such as wages and salaries, carriage inward, direct expenses etc. In other words, manufacturing expenses, interest charges, all kinds of dividends, provision for taxation, depreciation, etc. are inclusive in gross profit and not to be deducted from the income of the business, gross profits are to be calculated for two successive periods.

ii) **Profit Before Tax** : Profits before is defined as gross profit minus manufacturing expenses, general and administrative expenses, selling and distribution expenses, interest on short term loan. The interest charges on long term loan, provision for taxes, dividends and retained earning are inclusive and not deductable from profit before taxes.

iii) **Profit After Tax or Net Profit** : Net profit can be defined as profit before tax minus interest charges on long term loan and provision for taxes. Net profit comprises of the dividends and retained earnings.

II Economic Profit :

W.R. Henry and W W. Heynes state that, to determine economic profit a competitive or normal rate of payment for services of capital supplied by the firm must be substracted from the profit for the period as determined by conventional accounting methods [14].

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14. William R. Henry and W. Wrren Heynes, Managerial Economics Analysis and Cases, Dallas, Taxas, Business Publication, 1078.

M.C. Gupta defines economic profit as "the residue of income after all the contractual and non-contractual payments have been made from the revenue realised during a given period of time"[15].

The enterprise profit and modern corporation in the theory of income distribution have been classified income according to the nature of its sources. Wages are income from direct labour, interest is the income recieved from letting other people use one's money, rent is the excess of value produced by a productive factor over the payment needed to induce it as work and profit is the excess of income over cost of production. Wages, interest and rent have had a firm standing in this theory for well over a century, but profit has always been a point of controversy[16].

The economic concept of profit can be explained in the following stages :

First Stage : Profit an income of the capitalist enterpreneurs : Economists at this stage consider profit as an income derived to enterpreneurs. J.S. Mill in his book on principles of political economic defined profits as an aggregate of the income, as interest on capital, wages for managaement, and reward for risk bearing.

Second Stage : Deduction of interest charges from Pfrofit :
In different countries new systems of borrowing and lending have been developed. The interest which is to be charged on borrowed capital is treated as cost item and therefore must be deducted

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15. Ibid, P.3
16. Gordon R.A, Enterprise Profit and the Modern Corporation in American Economic Association Reading in the theory of income distribution, Philadelphia, The Blakistak Co., 1946, PP.558-570.

from the amount of profits.

Third Stage : Deduction of wages of management :

In a developed society it is possible for the company to appoint salarised managers and consider this salary as cost item. Wages and salaries are to be deducted from the amount of profits.

Fourth Stage : Reward for uncertainity :

Prof. F.H. Knight in his study about risk, uncertainity and profits, viz, measurable and non-measurable risks states that measurable risk such as risk of fire can be measured and considered a cost item. Therefore, measurable risks should be deducted from the profits, non-measurable risks which cannot be predicted cannot be deducted the profit are considered reward for taking such uncertainity.

It would be correct to say that the central problem of the economic theory is to determine ideal profits. Unlike rent, interest and wages, profit has always been a problem to accountants and economists. According to Professor M. Bronfenbrenner, the traditional theory of profit can be divided under five heads :

i) Profits as implicit returns to any services of resources supplied by enterpreneurs to their own services.

ii) Profit as a return for uncertainty bearing

iii) Profit as a distributive share.

iv) Profit as a quantity which the firm seeks to maximise

v) Profit as the marginal product of the decision making body is considered as a separate factor of production [17].

Marshall turned that concept into earning of managaement which included capital gains and losses. He included into the concept the element of risk and uncertainities [18].

Hawley confined that concept to reward for risk taking while knight associated it to "uncertainity - bearing" [19].

Robinson and Mrs. Joan define profit as that rate which induces producers neither to increase nor to decrease their output or which induces interpreneurs neither to expand nor to contract their plants [20].

Profit is equal to total revenues minus total costs. If total revenues are greater than the total cost, the firm will earn an economic profit. Total costs are equal to explicit costs and implicit costs. Explicit costs are the basic costs of buying and processing productive resources. Implicit costs are the salary that the owner could earn if he worked for someone else, the rental income the owner could receive if he leased his store to another businessman, and the interest he could earn if the fund he has invested in the business were put into stock or a savings account.

Economic Profit = Total Revenue - Total Costs.

Total Costs = Explicit cost + Implicit Cost.

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17. Bronfenbrenner M., A Reformulation of Naive Profit Theory, Southern Economic Journal, Akpril, 1960.
18. Marshall Alfred, Principles of Economics, 8th Edition; MacMillan & Co., London, P.62.
19. Knight F.H., Rkisk, Uncertainity and Profit, Chapters 5-11
20. Robinson and Mrs. Joan, The Economic of Imperfect Competition, London, 1933 Chapter 25.

Economic profits can be defined in another way as the returns accruing to risk bearing activities or profits as the result of uncertainty. Uncertainty refers to the expectation of the irregularity of income, it refers to the unknown and non measurable risk. Some risks, like the risk of fire and accident can be properly measured, these risks do not give rise to profits. But the non-meaksurable risks are the risk of losing the market due to changes in tastes and fashions which cannot be measured by statistical methods. These unknown and non-meausurable risks are called uncertainty which gives rise to profit.

III Social Profit :

Social profit is equal to social benefits minus social costs. According to K.V. Ramanathan social responsibility can be defined as the process of selecting firm level. Social performance variables, measures and measurement procedures, systematically developing information is useful for evaluating the firm's social performance and communicating such information to the concerned social groups, both within and outside the firm [21].

Prof. Lee Brummet in his article on Total Performance Measurement has indicated that the total performance of a company is a function of i) income ii) human resources contribution iii) Public contribution iv) environmental contribution and v) product or services contribution [22].

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21. Ramanathan K.V., Towards a Theory of Corporate Social Accounting, The Accounting Review, July, 1976.
22. Brummet L.R., Total Peformance measurement, Management Accounting, Novemeber, 1973.

A firm can contribute to social benefit only when it survives and has sufficient financial surplus. There is a positive correlation between financial surplus and social benefits because a higher income can be reached by providing proper work clidmate and manufacturing good products. The firm can conduct several activities which have an impact on human resources such as recruitment, training development of job skills, wage scales, industrial relation, advancement, working environment, welfare to the society, etc. The firm should contribute to the public by taking into account the impact of organisational activities on individuals or groups of people outside the firm. This includes taxes and duties to government, contribution to charitable, religious and educational activities, rural development, family welfare programmes, training and employment of handicapped persons.

The firm should contribute to the environment by taking steps in organising its production and recycling of waste in order to minimise pollution. The product or service contribution to society can be explained by making the product according to standards, ensuring safety and improving the quality of the product to provide more satisfaction to customers.

On the other hand, social costs consist of private cost plus the cost which may be imposed on other people or society such as pollution, sale of dangerous drugs, dust and fumes, radio active waste dumped in seas. In India, the recent Bhopal gas tragedy as a result of gas leakage polluted the atmosphere in the city resulted in the killing thousands of people. Firms which are dumping waste materials into streams, are avoiding private cost and imposing a cost on society. Customers and producers contribute to air pollution by emitting residue and fumes that are transmitted into the atmosphere. Such pollution represents social cost. It is the responsibility of the government to force the producers to pay for the full social costs. Social profit may be defined as the difference between social benefit and social cost over a period of time. Social responsibility accounting has developed to identify and measure net social contribution of individual firm over a period of time. The objective of social responsibility accounting is to determine whether the firm's strategies and activites affect the individuals, communities and generation and wheather they are with the social priorities, on the one hand and individual's legitimate priorities on the other.

The traditional concept of return on investment needs to be viewed on the basis of other parameters like social responsibility of an enterprise. Moreover, the measurement of the performance of the company should not depend only upon market share, plant utilization, contribution and margin but should look after public reputation and employee turnover, the employee's welfare, the quality of life, the opportunity for jobs, its impact on the environment need to be compared with the fixed standards and therefore judge the performance of the company.

Problems in the Definitions of Accounting Profit

If we look at the different definitions of accounting profit, we find three problems associated with those definitions. Accountants always face difficulties whether or not to include some items in the proft.

i) Problem of Taxation

Usually the accountants face the problem of taxation while calculating the profit, whether the provision for taxation are to be included or excluded from the profit i.e. whether the profit should be calculated before tax or after tax. The purpose for which the profit is calculated determines whether we should calculate the profit before tax or after tax. Since the purpose of the study is to calculate net return to investment, we need to consider the profit after taxes, because it aims at showing the fortune of the business and shareholders. The calculation of profit which deals with competitive mechanism or incentive aspects should take the profit after taxes.

On the other hand, for the inter - industry comparision or analysis of profitability of industries in different countries, we should take the profit before deduction of taxes from the profit because the rate of taxes imposed on the industries differs from country to country.

2. Problem of Interest Charges

The problem here is whether the profit should be calculated before or after the deduction of interest charges on borrowed funds. The problem of interst charges depends on the purpose of the study. The interest charges on borrowed funds should be deducted from the amount of profit while calculating return on equity capital becuase the interest charges are considered as cost item and need to be deducted. However, the aim of the study is to calculate earning on total capital employed, we should not deduct interest charges and they should be included in profit.

Interst can be charged in two ways. On the one hand, it is charged on long term loan which is used for fixed assets. On the other hand, interest charged on short term loan which can be used for day to day expenditure.

Singh and Whittington include interest charges on long term loan in profit Short term loans are considered as current liabilties and are excluded from total capital[23].

Since the aim of the study is to make inter-firm or inter-industry comparision, the interest charged should be deducted from the profit. Moreover, when the aim is to calculate return on total capital, the interest charages need to be included in profit

3. Problem of Non-operating Income :

Non-operating income is defined as income derived from different sources other than the sales of output of the company e.g. interest and dividends received outside investment, transfer fees, etc. The problem arises as whether the non-operating income should be included or excluded from the total profit. If we want to arrive at the best measurement of efficiency, we should exclude non-operating income from total income.

Types of Accounting Profit :

The calculation of profit under accounting system can be made in different ways :

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23. Ibid, PP 294-295

1) Gross Profit :

Gross profit can be calculated by deducting cost of goods sold from sales and other operating revenue over a period of time.

Gross Profit = Sales + Operating Revenue - Cost of goods sold

Cost of goods sold can be found out as under :

Stock of goods in hand in the beginning of the year

Add : Purchases made during the year

Add : Direct expenses paid for the above purchases e.g. wages, cartage, freight, carriage etc.

Less : Stock of goods in hand at the close of the year.

If sales and operating income exceed the cost of sales, the company will get gross profit. On the other hand, if cost of goods sold are more than sales and operating income, the company will suffer from gross losses.

2) Operating Profit :

Operating profit is equal to gross profit minus operating expenses. Operating income is the income which is derived from investment in business. It does not include income from outside investment such as income from sale of land. To quote Robert Johnson "The operating assets produce a stream of income known as operating income"[24].

Operating expenses mean all those expenses which are paid to operate the business such as administration, manufacturing,

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24. Robert W. Johnson, Financial Management, Boston, Allyn and Bacon Inc. 1976, P.37.

selling and distribution expenses, operating profit is caluclated after deducting depreciation and before taxes.

R.L. Gupta and Radhaswamy states "from gross profit other operating expenses are often divided into administration, selling and distribution expenses are deducted to get operating profit"[25].

3) Net Profit :

Net profit is equal to total income "operating and non-operating "minus total expenses" operating and non-operating". Non Operating income includes interst, dividend, rent, etc. from outside investment.

E.L. Kohler defines net profit as "profit remaining from revenues after deducting related cost"[26].

Net Profit comprises of divdends and retained earnings only. Interest charges on long term and short term loan, depreciation, managerial remuneration, taxes etc. are deducted from profit.

4) Profit for equity Shareholders :

The amount of profit which is left out to equity shareholder after deducting dividends on preference shares is called profit of equity shares.

5) Holding Profit :

Holding profit includes increase in the value of assets as a result of the rise in prices. Holding profit can be computed by calculating the difference between historical and current value of

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25. Gupta R L., Rakdhaswamy M., Advanced Accountancy, Sultan Chand and Sons, 1986, Volume VII.
26. Kohler E.L., A Dictionary for Accountants, New Delhi, Prencice Hall of India Private Ltd. 1979, P.322

assets. In other words, the difference between assets value at the beginning of the period and assets value at the end of the period over a period of time represent holding profit.

Accounting Profit and Economic Profit :

From the definition of accounting and economic profit we can find out the differences between the two concepts.

Accounting profit can be calculated by deducting explicit costs only from total income over a period of time. On the other hand, economic profit can be calculated by deducting both explicit costs and implicit costs from the total income. Implicit costs include interest on the owner's capital, rent of the owner's land and building, remuneration to the owner etc. Explicit cost include manufacturing, administration, selling and distribution expenses, depreciation, interest on borrowed capital etc. Economic profit = Total Income - Total costs (Explicit costs + Implicit costs) and Accounting Profit = Total income - Explicit costs.

Thus the differences between the accounting and economic concept of profit is that the implicit costs are deducted from economic profit while it is included in accounting profit.

Goldschmidt and Admon define accounting profit as "The increase in net worth during a given period or alternatively as the sum that may be withdrawn from the company without impairing its net worth position in comparision with the beginning of the period"[27].

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27. Ibid, PP.27-28

In the accounting theory, the value of assets are calculated by its historical cost in the past, the present value of assets in accountancy is equal to the historical cost minus accumulated depreciation. Net book value of assets is determined by its estimated life, salvage value and depreciation method to be used for calculation of depreciation. The value of assets under accounting valuation may come to zero when it is fully depreciated. The economic approach for the valuation of assets is based on future net receipts.

There are four stages for definition of economic profit :

Ist Stage	:	Profit, an income of the capitalist enterpreneur.
IInd Stage	:	Separation of interest charges from profit
IIIrd Stage	:	Separation of wages of management
Final Stage	:	Reward for uncertainity.

These definitions of economic profit have explained in detail in the discussion of the definition of economic profit.

The concept of profit at the fourth stage includes the reward for uncertainty referred to as 'pure profit' which consists only of non-measurable risk which can not be predicted and, the profit is considered to be a reward for taking such a riks. The concept of pure profit as defined above carries a number of problems. The net profit as mentioned in a joint stock company includes interest on shareholder's fund and reward for uncertainty bearing. This definition holds truth only when the enterprise is working under a perfect competition. But if the assumption of perfect competition is impaired in business

The economic concept of profit is defined by Hick "A person's income is the maximum value which he can consume during a week and still expect to be as well off at the end of the week as he was at the beginning".

In reality, in the business world a company may consume the materials which are bought at different periods at different prices. Some of the materials were bought in the past when the prices were different from the current price, while calculating the accounting profit, the historical costs of material need to be considered against the current sales.

The accounting procedures produce a profit figure that is different from economic profit. The balance sheet does not show the current value of company's assets.

Accounting theory assumes that the future earning capability of assets are represented by its historical prices.

In this connection Joel Dean has rightly pointed out "Economists look to the future as the basic source of value of today's assets. Accountants want to report historical facts and eschew 'speculation' about future"[28].

According to economic theory, the value of the assets is calcuated by discounting the estimated future net cost flow which will be generated by the assets. This will require us to calculate economic life of the assets, annual cash flow of the assets, discount factor or cost of capital and the rate of inflation in the country.

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28. Joel Dean, Managerial Economics, New Delhi, Prentice Hall of India Private Ltd. 1977, P.13

reality, the net profit may contian monopoly revenue, fortuitous gains, etc. In this case there is no statistical tool which can measure these elements to arrive at the concept of pure profit.

As defined above if we deduct interest charges on equity capital from net profit we can reach pure profit.

As L.A. Rede mentiones, while discussing the structure of profit rate in Indian manufacturing industries that, there are a number of practical difficulties when the question of computation of pure profit comes. They are as follows :

1) Which rate of interest is to be applied to compute the rate of interest on owned capital ? Should we apply the same rate of interest to all industries or should it be different and why ?
2) Secondly, since different industries borrow funds for different time periods, it is very difficult to get full details on interest charges.
3) Finally, the problem of measuring opportunity cost of capital would also crop up and would make the task more difficult.

Prof. B.V. Mehta says "Specialisation of entreprenurial function is not carried to any where near theoretical completness in the business world. Moreover, the business practice of not deducting interest on entire capital reflects the importance attached to the entrepreneurial capital as against the borrowed capital" [29].

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29. Mehta B.V., Industrial profits in India since 1946, unppublished Ph.D Thesis, Dep. of Economics, University of Bombkay, 1960, P.38

All these problems which are involved in the economic concept of profit keep us away from taking the economic profit concept for the analysis of profitability of Jordanian companies. However, the accounting concept of profit is furthertaken for a detailed analysis of profitability of selected large scale industries in Jordan.

PROFITABILITY :

Profitability means the dprofit making ability of the company. The measurement of profitability shows how the profit stands as result of total transactions made during a specified period.

Beyer gives the following definition for profitability "A single unified accounting structure should satisfy simultaneously the objectives of financial "or custodial" accounting and those of manageriald accounting. The system is complex, involving the integration of all the modern, profit - oriented accounting techniques into a single, decision - impelling, management information system"[30].

Profitability is always used for decision making rather than a reporting function. It is a yard-stick measurement for future ability and efficiency since the future depends on initial stage of analysis of the reported profit.

B.B. Howard and M. Upton define profitability "The word profitability is composed of two words 'profit' and 'ability' on

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30 Robert Beyer, Profitability Accounting for Planning and Control, New York, Ronald Press, 1966,P.4.

this basis the concept of profitability may be defined as the ability of a given investment to earn a return from its use"[31].

M.C. Gupta writes about profitability "the concept of profit is related to absolute figures. It does not tell us about the reasons, scatteredness and how it takes place in the relationship of one figure with another. These questions can be answered by a peep into the profitability of an entity"[32].

He further states, "Profitability is arelative term and its measurement can be achieved by profit and its relation with the other objects by which the profit is affected".

The objective of the investors is always to earn maximum amount of profit in return for their investment. The amount of profit earned depends upon different conditions prevailing in the market such as demand and suply conditions, advertisement, inflation, risk, type of industry, etc. The measurement and efficiency of these earnings can be done by using the techniques of profitability analysis.

Sam R Goodman writes "The far more preferable concept to be used for decision making is 'profitability'. Profitability in its simplest term is most like a level of worth. Profit is static and conventional profitability, dynamic and innovative"[33].

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31. Bion B. Howard and Miller Upton, Introduction to Business Fkinance, New Ydork, McGraw Hill Book Co. Inc.,1953, P.147
32. Ibid, p.6
33. Goodman S.R., Techniques of Profitability Analysis, Wiley - Interscience, 1969, P.32.

Profitability analysis has been considered to be the best interpretation of financial statement. Profitability is internal as well as external of the financial statement. It is internal because it measures the internal operation and working capacity of the company over a period of time. On the other hand, profitability analysis is used for external users such as shareholders, bond holders, potential investors, bankers, other creditors and government.

Profitability analysis is used as one of the most important aspects of financial appraisal of the industry. It gives a clear picture about the postion of a company. The return on investment is considered to be a prime measure for the performance of the management of a company. It gives answers to the questions of discharging the management's responsiblity to shareholders, customers, employees, community and perhaps to the company itself.

The measurement of profitability is the measurement of the overall efficiency of the business. The first objective of the management is the maximisation of profitability. The comparision of input - output and calculation return on capital employed or return on investment is the best indicator of the overall efficiency of the business. Return on investment is considered to be the best indicator for the overall profitability of the business because it measures the ability of the management in managing the fund invested in the business and its net return to capital employed.

Pearson Hunt States, "Return on investment is a prime measure of management's capability in handling funds entrusted to it as stewards Increasing acceptance of this measure as an indicator of performance rests on solid ground, and therefore, profit opportunities and performance are viewed in relation to the scale of resources of fund required to produce them"[35].

The management of the company should not look to maximisation of profit as the only goal but also look to the social profitability such as maximising the long term wealth and economic welfare of the society. The elimination of pollution by the company may increase the cost and reduce the profitability of the company, but it generates social profitability.

In the words of Earnest Dale, These social objectives "apear to urge the executive to assume an infinitely broad-gauge burden of responsibilities to all of the various public with whom he deals"[36]. Thus the responsibility of every company is to maintian profit besides the personal, marketing and the social objectives in the concise form.

Profit Versus Profitability

Profit and profitability is not the same, there are many differences between the two concepts. On the one hand the concept of profit is traditional, statistical, historical and the amount of income left to the shareholders after all the expenses have been deducted. Profit is only for reporting and recording. It is a

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35. Person Hunt, Basic Business Finance Text and Cases, Homewood, Illinois, Richard D. Irwin Inc. Ltd., 1966, P.13.
36. Earnest Dale, The Social and Moral Responsibilities of the Executive in Large Corporation, American Economic Review, May, 1987, P.54

residual term. Profit is the amount left to properietors which is shown in the profit and loss account after the deduction of all kinds of expenses. On the other hand, the term profitability is the analysis of the available profit which helps the management in taking suitable decisions. Profitability is a decision - making rather than a reporting function. It is the ability of a given investment to earn a return from the use of this investment. Profit does not explain the relationship between two figures. However, Profitability explains and gives reasons behind rise and fall in the amount of profit by the analysis and applying different ratios from the profit figures. Profitability makes comparision between the two periods of time and evaluates whether the financial position of the company is improving or declining. Profit is an initial stage for reaching profitability. Profit can be compared with raw materials, analysis of profit with different chemical requirement, and profitability can be compared with finished goods. Raw material (Profit) is an initial stage and necessary for finished goods (Profitability). The finished goods can be reached only by applying some chemical requirement (ratios). Profit is an essential stage for profitability.

As Sam R. Goodman mentiones "In contrast, profitability connotes dynamism and is espoused by the champions of contribution techniques, such as direct costing. These techniques which will be extensively treated, are especially useful in vieing isolated marketing and production problems" [37].

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37. Ibid, P.29

Profit is a statistical yard-stick shows the amount of earning which the enterprise gets and to be distributed to the shareholders. The concept of profitability is akin to the amount of profit and can be measured by using its techniques. The accounting concept of profit is the amount of income which has been accumulated at present over a period of time. Whereas, the concept of profitability is the analysis of the prsent amount of accumulated profit and forecasting for the future of the enterprise, depending on the past and present level of profit.

Profit means the amount of earning which appears in profit and loss account and it is used only for reporting to management to be included in annual report, fixation of future price, and for the purpose of taxes to be fixed by the government. Profit can be reported differently by using different techniques for calculating profit. Profit can also be different depending on the party to whom the profit is being reported i.e. shareholders, government, stockholders, investors etc.

Straight-line Versus Accelerated Depreciation :

There are different methods of depreciation recognised under the act such as straight line mehtod and accelerated method. The amount of profit which is reported in profit and loss account will be different depending on the method used for depreciation. Depreciation is a taxable deduction on profit and loss statement. The higher the amount of depreciation, the lower will be the profit reported. The method of depreciation to be used depends upon the party to whom the profit is being reported. If the profit is reported to the governement for tax purposes, the greater the amount of depreciation is charged so that the cost will increase and the taxable amount of profit will decrease. Straight line mehtod of depreciation charges the cost of assets over the same time period resulting in the reduction of expenses and increasing the amount of profit. Accelerated depreciation method charges the depreciation on present value, the amount of expenses will be more and this will result in reduction in the amount of profit due to the reduction in the amount of taxes. The amount of profit will be different depending on the method of depreciation to be used in valuation of assets.

FIFO Versus LIFO :

There are different methods for issuing material from store department to production department such as FIFO, LIFO, HIFO average method, etc. Under FIFO method, it is assumed that the material first received are the first to be issued at the same price at which the material was bought in the past. Thus, the units to be issued are priced at the oldest cost price listed on stock ledger sheets. On the other hand, the LIFO method is based on the assumption that the last item of material purchased are the first to be issued. Thus,in the LIFO method the price of the last consignment is used for pricing materials issued until it is exhausted, then the next consignment pricing is to be used and so on through successive consignments. The cost of goods that are manufactured depends on the method used for valuation. When the prices increase the use of FIFO technique is more profitable, where lower cost of materials are being consumed and sold,so that the profit will be more. But at the time of decreaseing prices in the market, the use of LIFO method is more profitable on the assumption that the higher prices inventory are already sold and lower priced inventory are yet to be sold, then the enterprise will get sufficient amount of profit and at the same time the tax obligation will be reduced. When the prices decline lower profit will be rported under FIFO method and higher profit reported under LIFO method. The amount of profit reported will be different depending on the method used for inventory valuation.

Capitalisation Versus Expensing Capital Items :

The profit of the enterprise will be affected depending on the treatment and classifying of works as capital or expenses. Capital items are treated as assets. Such preliminary expenses should be considered over the life of the assets, whereas, expenses items are debited to profit and loss account which gives immediate reduction in the amount of profit for the current year only Accountants may capitalize some work expenses which are supposed to be as expenses, on the other hand, they may use the expense items as capital. The judgement and treatment of work expenses as capital or expenses will affect the amount of profit. Judgement becomes an important decision when the enterprise has elements of both capital and expense items. Capitalization of works are usually done during the establishedment stage of the enterprise, adding new machinery to the factory for increasing capicity, new piping system in the factory, air condition systm, etc The treatment of work items as capital or expense will affect the figurs of profit. If we treat more items as expenses the amount of profit will be reduced. On the other hand, when more items are treated as capital the profit figure will be more than if we treated them as expense items. To reduce the amount of profit appearing in the balance sheet, the capital items are treated as expene items and also to reduce the amount of taxes payable to the governement.

Financial Versus Cost Accounts :

In big manufacturing concerns, where financial and cost accounts are prepared seperately, the figure of profit may not be the same under both costing and financial methods for valuation of profits.

The reason behind this difference is that the valuation of stock, overhead charges and some expenses items are included in one set of accounts only. Thus, reconciliation between cost and financial accounts is necessary and is usually done by the accountants to understand the resons behind the differences between the two accounts. The following financial charges are included in financial accounts and not included in cost accounts e.g. losses on the sale of investment, stamp duty and expenses on issue of shares, discounts on issues of bond debentures, interest on bank loans, mortgages, debentures, damage payable by law, penalties payable by law, remuneration paid to the proprietor in excess of fare rewarded for services rendered and losses of scrapping of machinery. The items which are treated as financial income are rent receivable, interest receivable on bank deposits, dividend received, fee received on issue or transfer of shares, interest or dividends received on investment and profit made on the sale of fixed assets. On the other hand, there are some items which are included in cost accounts only and not included in financial accounts such as interest on owned capital though not incurred. This is included in cost accounts to show the nominal cost of capital employed, rent charged on the premises owned by the firm, salary of the proprietor where he works but does not charage salary. There are some items which are included in accounts only for the appropriation of profits such as donations and charities, income tax, dividend paid, additional provisions for depreciation on buildings, plants, provision for bad debts, amount of goodwill written off, preliminary expenses, underwriting commission, capital expenditure specially charged to revenue, etc

Under and Over-absorption of Overhead :

The absorption of overheads in cost accounts is always based on an estimate or predetermined ratio e.g. percentage of prime cost, percentage of sales, percentage of direct material, percentage of wages etc. may be more or less than the actual amount of overhead incurred. If the amount of cost is not fully recovered i.e the amount in cost accounts is less than the actual amount, this is called underabsorption, as a result the figure of profit in cost accounts will appear more. On the other hand, if the overhead expense in cost account are more than the actual amount, it is called over absorption and will result into reduction in the amount of profit. Thus under absorption and over absorption of overheads lead to differences in financial and cost accounts. Moreover, selling and distribution of overhead are sometimes ignored from cost accounts which will lead to increase in the amount of profit in cost accounts. The under recovery or over recovery of overhead expenses may be transferred to profit and loss account in costing or may be carried to the next period.

If the differences in over or under absorption are written off to cost, profit and loss account the profit figure will agree, otherwise the difference in profit will appear in cost accounts. Under and over absorption of overhead may result into greater or smaller amount of profit in cost accounts than these shown in financial accounts. Abnormal gain and losses may be taken to profit or loss in costing or it may be excluded from cost accounts. Whether to include or to exclude th abnormal gain or abnormal losses in cost accounts will affect the profit or loss shown by cost accounts and will lead to the differences between the profit figure in cost on financial accounts.

Definition of Profit and Profitability in this Study

There are many definitions of profit as given by different scholars. There is no inherent sanctity in any definition of profit. Usually the profi understood by different persons depends solely on the aim of the person or business. Shareholders are interested to know the amount of net profit or return on capital employed so that they know about the profit which earned by their equity capital. The governemtn is intereted to know the amount of correct profit so that the amount of taxes can be easily collected.

The objective of the shareholders is to get the maximum amount of profit or to maximise the present value of their net worth. On the other hand, the consumers want to pay low price for the products so that the shareholders can get the minimum amount of profit from them. Thus, the competition among businessmen and between businessmen and consumers, ultimately lead to different opinions about the concept of profit and lead us to define profit in the following ways :

Gross Profit :

Gross Profit can be defined as total income minus cost of goods sold, gross profits comprise of the interest charges on short term or long term loan, provision for taxation, dividends, retained profits and depreciation charges The definition of gross profit does not include non-operating income as it is considered to be derived from outside investment. Direct expenses (i.e. purchase expenses, carriage inward, wages and salaries etc.)are not included in gross profit, whereas the manufacturing costs (i.e. manufacturing expenses, selling and distribution expenses, administrative expenses) are included in gross profit. Goss profit shows the amount of profit available to shareholders after deducting the cost of goods sold.

Net Profit :

Net profits are defined as total income minus cost of raw materials, direct expenses incurred on purchases, manufacturing expenses, administrative expenses, selling and distribution expenses, interest charges on both long and short term capital, minus managerial remuneration, depreciation and provision for taxation. In other words, net profits are equal to gross profit minus all other expenses charged on the production processes. Net profits comprise of the dividends and retained earnings only. Non-operating income is not included in net profit because it is earning from outside business's investment. This definition of net profits explains the performane of the shareholder's income. Net profits are the amount of earning left to the shareholders after deductng all kinds of expenses (cash and non-cash expenses) Net profit can be analysed by different ratios to judge the efficiency of the business

Profitability :

Profitability is defined as a dynamic ability of the business especially used for viewing and measuring the efficiency or otherwise of the business by aplying the various techniques of ratios and statistical methods.

Importance of profitability Ratios :

Profitability ratios are ratios which measure management's overall effictiveness as shown by the returns generated on sales and investment The return on investment has been regarded as a primary ratio of the profitability ratios because it specifies the relative net profit earned. However, it provides not only a vehicle for measuring relative business efficiency but also focuses attention on whether an adequate return has been earned in accordance with the expectation of the investors on the capital contributed by them.

In many cases it becomes necessary to disaggregate an organisation into divisions and the return on divisional investment can be employed to judge the divisional performance. The importance of profitability ratios from various points of view are as follows .

1. Management

The management of the company are interested in analysing information related to the company. In fact the mangement is more concerned with profitability analysis because it is they who are responsible to the owners. On the basis of profitability analysis the management may study the efficiency of the departments, assets etc. and maintain sound divident policies.

2. Creditors

Creditors are those persons who have already advanced money to the company. They are the persons whose interest and welfare is behind the prosperity of the company. They are interested in the progress, the day-to-day working position and profitablility of the company, Commercial creditors look after the profitability of the company's operations. Long term creditors would consider the nature of the assets which are to be mortgaged as security of their deposits. They are interested in the earnings of the company. The profitability and liquidity position are the two principal factors encouraging the creditors to invest their money in the business

3. Government

Government has to collect sales tax, income tax, excise duty and other taxes from the company. The government is interested in analysing the published accounts because a substantial portion of the profits earned by the company go to the governement in the form of taxes. It has a right of licensing, controlling costs, fixing prices, tax collecting, subsidizing other regulations desirable for the interest of the community.

4. Shareholders

Shareholders are one of the several parties who are interesting in the analysing of published account. They are interested to know how profitable the business operations have been and how the turnover of assets is run by the company. Profitability analysis give a clear picture to the shareholders about the types and amont of earning, increase or decrease in the amount of expenses, nature and value of assets possessed and other facts regarding the returns for external uses. The shareholders of the company should take into consideration the nature of the business, earning trend, quality of the management and the present position of capital structure. The profitability analysis shows the degree of risk in the investment.

5. Employees

Like creditors, employees are also interested in the successful running of the company. Their bread and butter depends mostly on the profitability of the company. In some companies there are profit sharing agreement with employees and they are interested to know how the earning power and working results have been ascertained by the company.

6. Investors

Investors are also very much in need of detail analysis of profitability ratios to judge about the progress of the company before their investment. They forecast the future earning power of the company on the basis of past information. The financial analysis is the only guidance for taking decisions regarding the investment to be made in that particular company. After keeping all the analysed facts in mind they so further in investing their money in the company.

7. people

The people of every country should know what is happening in the business world People need to take care of the social benefit of the company Social profitability can be ensured only through the financial analysis of the company.

Profitability and Productivity :

Productivity, capacity and profitability do no appear to be the same but are very closely related to each other and any change in one of them affects the others directly.

Profitability means the earning profit capacity of the company or each unit of the industry. Productivity and profitability are also related to each other. If the productivity is high in the company, there will be lower per unit fixed and variables overhead charges and consequently lower cost per unit and higher profitability. Other things remain the same, lower productivity will result in lower profitability. However, in case of a situation where there is no change in productivity, profitability may be minimised due to various factors such as, increae in cost of the product, severe competition, decrease in sales etc.

Productivity expresses the technological relationship between input and output and it is the function of economic efficiency and ability of unit of assets in the company.

Increase in capacity leads to higher profitability. When the capacity of the company increases, it may improve its profitability. The existence of positive association between productivity and capacity on the one hand leads to an increase in the profitability on the other.

Measurement of Profitability

Profitability is the end of business activity based on many variables like volume of sales, price and costs on one hand and investment on the other hand. In order to measure the profitability, it is necessary to establish a quantitative relationship between profit on one hand and either the volume of sales or investment on the other, Profit margin is reached when profits are taken as a percentage of sales. Return on investment are shown when the profits are taken as a percentage of ivnestment

There are various methods for measuring the profitablity and one of them is the rturn on investment

Return on Investment :

Return on investment is a prime measure of profitability and management's capacity. The acceptance of ROI is increasing as a measure and an indicator of the performance of a company. It examines everything happening in the company and is used as a basic measure not only for profitability but also for the overall performance of the company Person Hunt williams and Donaldson have given four reasons for the wide use of the return on investment :

i) it recognises the value of capital, as capital is available in limited quantum only and the owner can use it with benefit in other ventures ;

ii) it puts a premium on economical use of capital in an enterprise ;

iii) its use points to broad avenues for improvement of performance; and

iv) it has a high degree of administrative feasibility.

The term can be understood by all those concerned in the enterprise and can be applied to the operations of various divisions, subsidiaries or branches of an enterprises. The ratio furhter has the advantage of reminding one that the main object of an enterprise is to maximise return from the capital employed in a business, as capital is typically a scarce resources.[38]

However, the uses of return on investment approach for measurement is not free from ambiguity. This is because of the fact that the numerator and denominator of (i.e. return and investment) are subject to differing interpretations. As there is no standard definition for the two components of ROI. Some institutions may define the term of investment quite broadly while others may define it quite narrowly. The result of this

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38. Ibid, P.141

variations of ROI are different from company to company and from time to time

The higher the return on investment, the better is the position of the company and the more efficient the uses of its resources. The return on investment is the product of profit margin multiplied by the investment turnover. The relation between these two components can be expressed in the following formula :

Return on Investment = Profit Margin x Inavestment Turnover

$$= \frac{\text{Profit}}{\text{Margin}} \times \frac{\text{Investment}}{\text{Turnover}}$$

$$= \frac{\text{Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Investmeny}}$$

In other words, Return on Investment or Return on capital employed or return on assets is a detailed examination of the triangular relationship among sales, assets and profit as a measure of a firm's earning power[39].

However, return on investment is the product of multiplication of the above variable whereas these variable are a result of a number of variables. The rate of return on investment can be directly calculated by dividing profit by the capital

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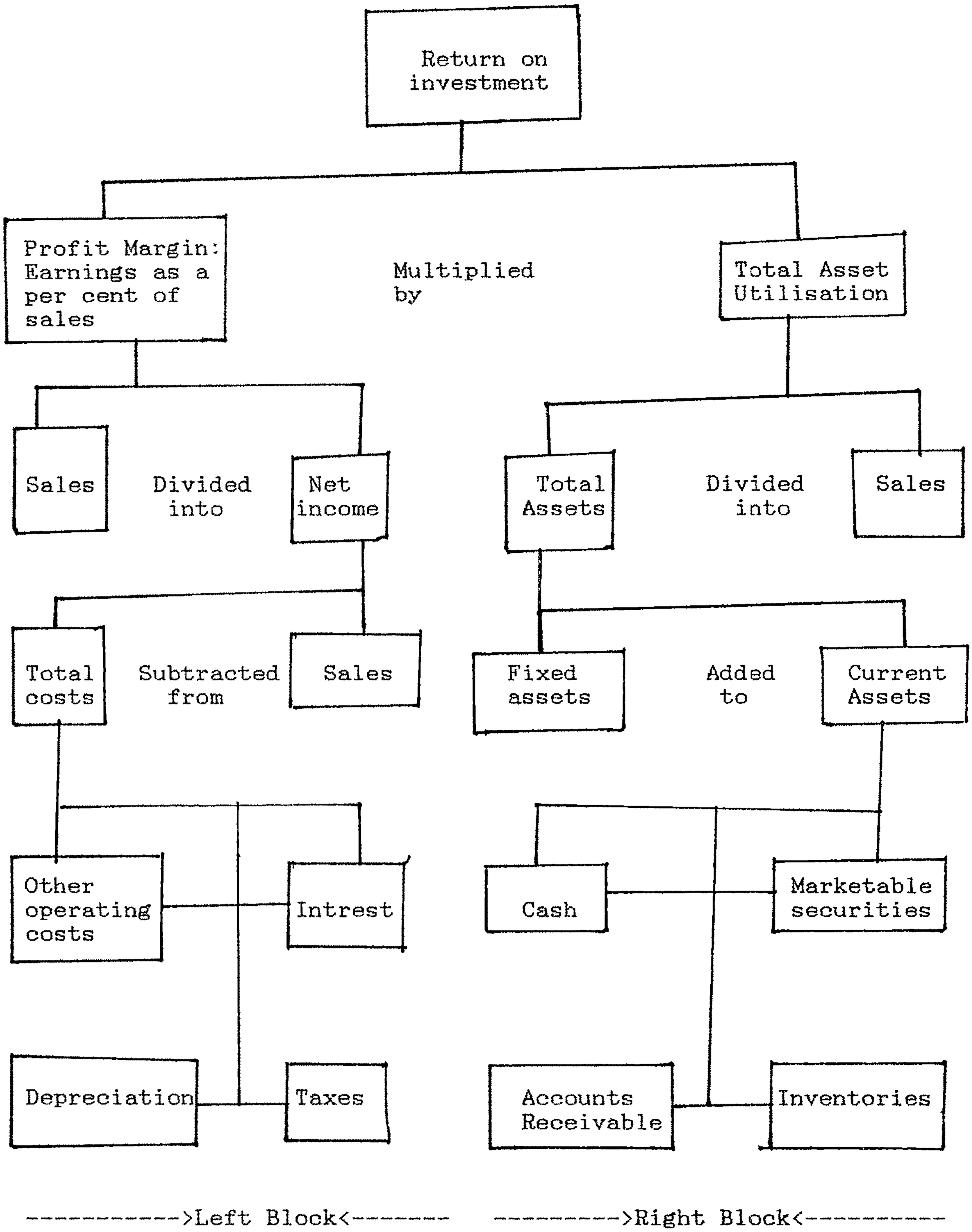
39 Pandey I M., Concept of Earning Power, Accounting Journal, Rajesthan Accounting Association, April 1980, P.12.



Return on investment
Profit Margin: Earnings as a per cent of sales
Multiplied by
Total Asset Utilisation
Sales
Divided into
Net income
Total Assets
Divided into
Sales
Total costs
Subtracted from
Sales
Fixed assets
Added to
Current Assets
Other operating costs
Intrest
Cash
Marketable securities
Depreciation
Taxes
Accounts Receivable
Inventories
----------->Left Block<-------
---------->Right Block<----------

invested The result will be that, profit will be the numerator and investment will be the denominator.

$$\text{Return on Investment} = \frac{\text{Profit}}{\text{Investment}}$$

It should be noted here that the use of ROI which in fact is a combination of some other ratios was pioneered by Du Pont. That is why it is sometimes known as the Du Pont system of financial control.

It is clear from the Du Pont Chart that the right block charts out the investment made in various assets and the left block depicts the earnings and expenses The net income and total assets are related to sales which finally yield a single measure which peaks the return on investment. However, it is clear that the cash, the account receivable, marketable securities and inventories shown on the right blck at the bottom and added up as current assets, current assets are added to fixed assets. This aggregates into total assets which are divided into sales to get a ratio of total assets utilisation or total assets turnover. If we analyse the left side of the block, we find at the bottom the sum of the interest, taxes, depreciation and other operating expenses into total costs which are substracted from sales to get net income. The net income is divided by sales to generate profit margin. The two measures of total assets utilisation and profit margin multiplied together generates return on investment.

The variation in return on investment depends on how investment and returns are defined. Investment may be defined as follows .

1. Gross capital employed which includes total fixed assets and current assets.
2. Net capital employed which consists of total fixed assets plus current assets minus current liabilities.
3. Prorietor's net capital employed which includes total assets.
4. Average capital employed which consists of opening plus closing balances of capital, reserves, accumulated depreciation and borrowings divided by two.

on the other hand, return may be defined in various ways for example

1) Gross Profit
2) Profit befoe depreciation, interest and taxes (PBDIT)
3) Profit before atax (PBT)
4) Profit after tax (PAT)

The following definitions of return on invstment are used in the business world :

1) Gross Return on Investment which is the product of gross profit divided by total net assets.
2) Net return on Investment which is generated by net profit divided by total net assets.
3) Return on Capital Employed which is the result of profit before tax plus interest divided by net worth.

4) Return on investment based on profit before depreciation, interest and taxes.

5) Return on investment which is based on profit before tax.

Value Added Approach :

Value added is an important measure to judge the efficiency of a company It shows the net value or wealth added or craeated during a period of time. A company can not survive without adding value but it can exist without making profit for sometime. The consequencies of not making profit by the company may cause sickness, but if there is no value added created to the company it may cause death to it over a period of time. The concept of value added is broader than the concept of profit. The measure of value added is worked out to help the management to find out productivity. The value added statement is used broadly in developed countries but the prsentation of value added is neither statutory nor compelled to be computed in the annual report. Value added is an exess of turnover plus income from services over the cost of materials and cost of services. Turnover means gross sales minus the amount of returns, goods used for self consumption, commission etc. The word income from services includes income from dividends, subsidiary companies, rent and compensation and other miscellaneous income. The cost of material includes the cost of material consumed, cost of stores and spare parts consumed during the process of manufacturing. The cost of services includes the cost of power, fuel, repair and maintenance, bank commission, insurance premium, advertising and publicity, postag and and telephone, printing, auditing, legal charges and travelling cost

M C Gupta writes "In a developing economy the real profitability of an industry needs to be assessed not only on the basis of its increasing profits in absolute terms, or on its increasing rate of return on investment in relative terms but also on the basis of value added by an industry, to the Gross National Product"[40]

40 Ibid. P 93