Chapter 2

Conceptual Framework of Financial Efficiency and Productivity Management

2.1 Concept of Efficiency and Performance

The word efficiency as defined by the Oxford dictionary states that: "Efficiency is the accomplishment of or the ability to accomplish a job with minimum expenditure of time and effort".¹

It refers to the internal process that leads to output. It focuses on the means to achieve the desired end. As expressed by Peter Drucker "Doing the things the right way is Efficiency." This denotes the fulfillment of the objective with minimum sacrifice of the available scarce resource.

Fatless and speedy compliance to the process or system procedure is a measure of efficiency. Providing a specified volume and quality of service with the lowest level of resources capable of meeting that specification, performance measures and or indicators are required. These include measures of productivity, unit volume of service etc. These measures help in minimizing of the resources in achieving the organizational objectives i.e., things rightly.

Performance is the execution or accomplishment of work feats etc. or a particular, action, deed or proceeding is refers as performance.² However, the manner in which or the efficiency with which something reacts or fulfils its intended purpose is defined as performance. Performance may thus, mean different things to different businesses. Success or failure in the economic sense is judged in relation to expectations, return on invested capital and the objective of the business concern.
“In understanding the term performance, a clear distinction needs to be drawn between Performance Measures and Performance Indicators. Performance measures need to be based on an evaluation of the causes and effects of policy intervention whereas a performance indicator is less precise and usually provides only an intermediate measure of achievement.”

2.2 Financial Performance

Financial Performance is the blueprint of the financial affairs of a concern and reveals how a business has prospered under the leadership of its management personnel. Performance of any organization can always be judged in the light of its objectives and the main objective of a bank is to earn profit and to enlarge profit by making the most efficient use of the resources available to them. The Indian Public Sector did run with the objective of maximizing profits. They were making due contribution towards the fulfillment of socio-economic objectives laid down by the government and SEBI.

The financial performance of companies could be analyzed by a composite index of not only quantifiable selected trends and ratios, an analysis of the financial statements, a study of the cash flow and the fund flow statements etc., but also qualitative factors like operational efficiency and effectiveness and socio-economic development of the country.

2.3 Concept of Efficiency

‘Efficiency’ is closely related to security of the working system of a company as a whole according to Sudha Nigam. Appraisal is a technique to evaluate past, current and Projected Performance of a Concern.” It is a powerful applied tool to examine, to measure, to interpret, to weigh critically and draw outputs. Different specialist who examines the specific problem with their company does appraisal. Appraisal can be divided into
two Parts (I) internal (ii) external. According to Pitt Francis “Internal efficiency of the company not only means making some of having adequate human, Physical and Financial resources but seeing that they are optimally employed.”⁵ Thus, the concept of efficiency means the evaluation and performance of a concern included in the appraisal.

2.4 Operational Efficiency

Operational Efficiency of an organization is the ability utilizes its available resources to the maximum extent Operational Efficiency can be judged in the light of financial efficiency. It can be said that neither profitability ratios turnover ratios by themselves provide good indicators measure operational efficiency.

Operational Efficiency of a bank is associated with diverse aspects such as operational cost effectiveness profitability, customer services, priority sector lending, and deployment of credit in rural and backward regions and mobilization of deposits.⁶ In short, it is said that it is the ability to utilize the available resources in order to carry out operational activities of the aluminum industry, which reveal its success failure in providing aluminum products to its custom.

2.5 Measurement of Performance

“Measurement is a process of mapping aspects of a domain into other aspects of a range according to some rule of correspondence” While according to Tripathi “Measurement is the assignment of numerals to characteristics of objects, persons, states or events, accounting to rules. What is measured is not the object, person, state or event itself but some characteristics of it. When objects are counted for example we do not measure the object itself but also its characteristics of being present. We never measure people only by their age, height, weight or some other characteristics.”⁷ But we measure through their overall performance.
While measuring the performance of the company the first requirement is the thoughts and goals of human beings are mostly realized through the establishment of diverse kinds of relevant associations. The functions of all associations were established for fulfillment of some goals and objectives. As an output point of view Association needs measurement of performance to find out as to how much the organization has achieved by its course of action towards its goals or targets.

**Financial Appraisal:**

"Financial Appraisal is a scientific evaluation of profitability and Financial Strength of any Business Concern". According to Kennedy and Macmillan financial statement analysis attempt to unveil the meaning and significance of the items composed in Profit and Loss account and balance sheet So as to assist the Management in the formation of sound operating Financial Policies".  

According to Accounting Point of view financial statements are prepared by a business enterprise at the end of every financial year "Financial Statements are end products of financial accounting". They are capsulated periodical reports of financial and operating data accumulated by a firm in its books of accounts - the General Ledger.

For proper interpretation of financial statement, users must have a basic understanding of the conceptual framework and principles underlying their preparation. Otherwise users will not recognize the limits of financial statements. The financial statement analysis facilitates a sufficient guideline about the behaviour of financial variables of measuring the performance of different units in the Industry it also facilitates to indicate the current scenario of improvement in the organization.
2.6 Concept of Performance Appraisal

"Performance Appraisal as a concept is purely a developmental tool for a company. As a developmental tool, it is not merely the end product or the final assessment. It is important as the whole process of appraisal. The learning opportunity for the appraiser and the apprise starts with setting of the tasks and targets. It manifests in the whole gamut of appraisal procedure such as self appraisal, appraisal interviews final appraisal, grading and developmental planning etc." 9

Performance appraisal is composed of two words “performance and appraisal. Performance indicates how the management of an enterprise has been accomplishing the goals, which they had set for the enterprise. Performance is a measure of the degree to which an organization fulfills its purpose. And the purpose is to achieve its objectives. To quote E.A. Helfert, “The measurement of business performance is more complex and difficult, since it must deal with the effectiveness with which capital is employed, the efficiency and profitability of operations, and the value and safety of the various claims against the business.” Appraisal refers to critical review with a view to improving performance. It includes the act to examine, to measure, to interpret and to draw conclusions. Achievement involves an integrated use of human, financial and natural resources. Erich L. Kohler refers to performance as “a general term applied to a part or all of the conduct or activities of an organization over a period of time- often with reference to past or projected costs, efficiency, management responsibility, or the like.” However, appraisal can be defined as a systemic procedure of drawing conclusions. Every enterprise is assessed on the basis of its activities in the various areas.
2.7 Meaning of Performance Appraisal

Performance appraisal may be defined as a critical assessment of the various activities, in the different areas of operations, of an enterprise. A periodical appraisal of the operations of an organization is essential for financial strength and good profitability just like a regular checkup for physical fitness. In the case of bad or deteriorating situation it indicates the areas of improvements whereas in a good situation the way to improvement in the performance of an organization to the maximum extent. Thus performance appraisal is a process of evaluating the efficiency and effectiveness of an organization.

2.8 Basis of Performance Appraisal

Performance appraisal involves a broad area of coverage. The perspective throughout is on the effective management of company resources. Performance appraisal can be done through a careful and critical analysis of the financial statement of an enterprise. Usually the financial statement of a business concern comprises two statements: balance sheet or position statement and profit and loss account or income statement. However, in big concerns two more statements are prepared. They are profit and loss appropriation account and fund flow statement. The overall performance of a business cannot be judge without a systemic analysis and interpretation of its financial statements. The advantages of such an analysis are as follows.

(i) The results based on a proper financial analysis are more scientific and logical; hence there is less possibility of their being wrong.

(ii) Such decisions are not subjective. The complexities, depth, interdependence and multi decision attitude of various modern business activities are not easy to understand without a rational approach or criticism.
(iii) No doubt, experience is a good teacher, but the facts and decisions taken on the basis of observation and experience can be rectified only if they are supported with a proper financial analysis.

(iv) Such an analysis makes the information more understandable even to a layman. Decisions based on it are more practical.

The following parties are deeply interested in a systemic and sound financial analysis and interpretation:

1. Debenture holders in the company
2. Creditors, suppliers of raw materials and other parties who deal with the company
3. Employee and trade unions
4. Economist and investment analysts
5. Existing and prospective investors
6. Customers who wish to enter into a long term agreement with the company
7. Taxation authorities
8. Member of parliament, legislatures, the Public Accounts Committee and various governmental committees and commissions
9. Company Law Boards etc.

2.9 Objective of Performance Appraisal

(i) To find out the financial stability of a business concern
(ii) To assess its earning capacity
(iii) To estimate and evaluate its stock and fixed assets
(iv) To assess its capacity and ability to repay short and long term loans
(v) To estimate and examine the possibilities of its future growth
(vi) To estimate the administrative efficiency of its management
Performance appraisal is a close and a critical study of various measures observed in the operation of Business Organization. The concept of human body is similar to the concept and case of business organization.

Human body requires medical check up and examination for maintaining fitness of bodies, similarly the performance of a business organization has got to be assessed periodically. Erich A. Helfert organization has got to be assessed periodically. Erich A. Helfert started "The person analyzing business performance has clearly in mind which tests should be applied and for what specific reasons. One must define the view points to be taken, the objectives of the analysis and possible Standard Comparison". Business Organization have the "Balance Sheet" and the "Profit and Loss Account" by the statements of change in financial position value added statements are also prepared for annual reports. They may be considered as additional financial statements. The data embodied in financial statements are rearranged in order to facilitate the appraisal of performance. The financial figures are approximated to the nearest rupee to simplify the process of appraisal.

However no single attempt can give firm results of appraising the performance of business organization. Business conditions differ according to location, type of facilities, products and services, plant capacity, capital structure, accounting policies, caliber of management and levels of efficiency. Such conditions of business organizations have become more complicated in the event of multi-product and multi business organizations. All these differences are part and parcel at the time of appraising the performance of a business organization.
2.10 Concept of Profitability

Profitability is the ability to earn profit from all the activities of an enterprise. It indicates how well management of an enterprise generates earnings by using the resources at its disposal. In the other words the ability to earn profit e.g. profitability, it is composed of two words profit and ability. The word profit represents the absolute figure of profit but an absolute figure alone does not give an exact ideas of the adequacy or otherwise of increase or change in performance as shown in the financial statement of the enterprise. The word ‘ability’ reflects the power of an enterprise to earn profits, it is called earning performance. Earnings are an essential requirement to continue the business. So we can say that a healthy enterprise is that which has good profitability. According to hermenson Edward and salmonson ‘profitability is the relationship of income to some balance sheet measure which indicates the relative ability to earn income on assets employed.’

2.11 Profit and Profitability

Profits are the cream of the business without it may not serve the purpose. it is true that “profits are the useful intermediate beam towards which capital should be directed” Weston and Brigham mentioned that “to the financial management profit is 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 government a measure of taxable capacity and a basis of legislative action and the
country profit is an index of economic progress national income generated and the rise in the standard of living.”\textsuperscript{12} While profitability is an outcome of profit. In other words no profit derived towards profitability. “It may be remarked that the profit making ability might denote a constant or improved or deteriorated state of affairs during a given period, thus, profit is an absolute connotation were as profitability is a relative concepts.”\textsuperscript{13} Profit and profitability are two different concepts, although they are closely related and mutually independent, playing distinct role in business. R.S.Kulshrestha mentioned that “profit in two separate business concerns might be the same and yet more often they note their profitability could differ when measured in terms of the size of investment”\textsuperscript{14} as outcome of above statement it can be said that profitability is broader concept comparing to the concept of profit levels of profitability helps in establishing quantitative relationship between profit and level of investment or sales.

\textbf{2.12 Concept of Financial Efficiency.}

Financial efficiency is a measure of the organizations ability to translate to its financial resources into mission related activities. Financial efficacy is desirable in all organization of individual mission. It measures the intensity with which a business uses its assets to generate gross revenue and the effectiveness of producing, purchasing, pricing, financing, and marketing decisions. At the micro level financial efficiency refers to the efficiency with which resources are correctly allocated among competing uses at a point of time. Financial efficiency is a measure of how well an organization has managed certain trade of (risk and return, liquidity and profitability) in the use of its financial efficiency. Financial efficiency is regarded as a measure of total efficiency and a management guide to greater efficiency and the extent of the profitability,
liquidity, productivity and capital strength can be taken as a final proof of a financial efficiency. Financial efficiency directed towards evaluating the liquidity, stability, and profitability of a concern which put together of a concern. The word efficiency as defined by the oxford dictionary states that; efficiency is the accomplishment of or the ability to accomplish a job with minimum expenditure of time and effort. As expressed by peter ducker “doing the things the right way is efficiency”. This denotes the fulfillment of the objective with minimum sacrifice of the available scarce resource. Fatless and speedy compliance of the process or system procedure is a measure of efficiency providing a specified volume and quality of services with the lowest level of resources capable meeting that specification, performance measures and or indicators are required. These are including measures, productivity, unit of volume of service etc.

2.13 Measurement Tools of Profitability

For making policy decision under different situations, measurement of profitability is essential. According to Murthy V.S. “The most important measurement of profitability of a company is ratio. E.g. profitability of assets, variously referred to as earning power of the company, return on total investment or total resources committed to operations. Profitability ratios are calculated to measure the operating efficiency of the firm. According to Block and Hirt “The income statement is the major device for measuring the profitability of a firm over a period of time.” Measurement of profitability is as essential as the earning of itself for the business concern. Some managerial decision like rising of additional finance, further expansion, problems of bonus and dividend payments rest upon this measurement. It can be measured for a short term and as well as for a long term. The relation to sales is the good short-term indication of successful growth while profitability in relation to investment is the healthier for long growth of the business.
Profitability provides overall performance of a company and useful tool for forecast measurement of a company’s performance. “The overall objective of a business is to earn a satisfactory return/profit on the funds invested in it, while maintaining a sound financial position. Profitability measures financial success and efficiency of management.”

2.14 Types of Performance

There are such areas where the performance should be modified of improved by effective assessment of various types of activities performed by the business organization in different areas of operations. Those areas of operations may be termed as the areas of performance. The important areas described under the following heads:

2.15 Concept of Productivity

"Productivity means different things to different things to different people. To workers, productivity means a speed up in their work pattern. To union leaders it means the productivity for opportunity to negotiate for higher wages. To management it means increased profitability to consumers and it means better goods at lower costs. To marketing directors productivity improvement increased the firm’s competitiveness abroad by reducing the cost of good sold in foreign market and to economists; it means an increase in country's standard of living field to gain in output per man hour". According to Dr. Chauhan P. L. "Productivity is at the heart of economic growth and development. It is focal point in business and economic matters all over the world. All working people, farmer, a carpenter, a black smith, a technician, businessmen, an engineer, a nurse or doctor, any one is interested in productivity. When any person strives to make a better living for himself and his family, he realizes more on productivity than on hard work". Productivity is the ratio of output to input. Productivity denotes the
efficiency with which the various inputs are transformed into the goods and services. Productivity is said to be high when more output is derived from the same input. “Productivity denotes and trend of productiveness of the factors of production, labor, materials, and capital. It is usual today identify this trend as a measure, a ratio or a rate of return, a relationship between output and input over a period of time”. According to Maital and Meltz "Productivity has been termed as myst” because the studies on productivity growth hide more than they reveal" Productivity is measured as the ratio between the output of a given commodity or service and the inputs used for that product, which are in the process. And therefore the concept of productivity term that" It should classify and bring order to an intricate array of variable relating to inputs and outputs. But to think of Productivity today is too often unproductive because the term lacks specific definition and general acceptance" Commonly, Productivity, as a source or cause of comparatively high levels of output and improvements in productivity as the major contributors to growth of particular business unit. Thus "Productivity is a rough measure of the effectiveness with which we use the most important productive resources". Productivity therefore, refers to the measurable relationship between well defined outputs and inputs.

Productivity is usually defined as a ratio of output produced per unit of resource consumed by the process. "Productivity is a measure of performance in producing and distributing goods and services, value added or sales minus purchases divided by workers employed".18 Productivity has become a household word as almost everyone talks about it. Yet, the term ‘productivity’ means different things to different persons. As a Phenomenon, it ranges from efficiency to effectiveness, to rates of turnover and Absenteeism, to output measures, to measure of client or consumer satisfaction, to intangibles such as disruption in
workflow and to further intangibles such as morale, loyalty and job satisfaction. To put it bluntly, the definition of productivity is complex and this is because it is both a technical and managerial concept. Productivity is a matter of concern to government bodies, trade unions and other social institutions not minding the disagreements over its conceptualization by different groups and individuals. Hence, discussing productivity at all levels is common because of the direct relationship between productivity and the standard of living of a people. It is perceived that the more different are the goals of the different individuals, institutions and bodies that have a stake in productivity as a problem, the more different their definitions of productivity will be. To date, at least three perspectives have dominated the field of productivity namely economics, industrial engineering, and administration. These perspectives have complicated a search for any precise definition of the concept ‘productivity’. One additional problem to the conceptualization of the term ‘productivity’ is the fact that productivity is not only to be defined and managed; it is also to be measured. Its measurement poses no fewer problems than its definition. Perhaps, Krugman (1990) intended to assert that defining or measuring productivity is a herculean task when he asserted that “productivity isn’t everything, but in the long run it is almost everything”¹. The primary objective of this paper is to attempt to demystify productivity conceptually by examining in detail what productivity is and what it is not. Enhanced understanding of the meaning of productivity is likely to be guaranteed if its measurement is equally examined to attempt a balance between theory of productivity and practice of productivity. This paper will delve into issues of productivity measurement whereby conscious effort will be made to define what is definable, measure what is measurable and count what is countable. In sum, the aim of the paper is to expand the depth of our understanding of
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the concept and measurement of productivity. The paper is organized as follows after this introduction. Section two is devoted to the examination of productivity as a concept where issues revolving around the definition of productivity are discussed. Section three examines the significance of productivity with a view to deepening our understanding of productivity as a concept. Section four examines the measurement of productivity in all its ramifications. Section five concludes the paper by attempting a response to the question of how productivity can be improved.

The least controversial definition of productivity is that it is a quantitative relationship between output and input (Iyaniwura and Osoba, 1983, Antle and Capalbo, 1988). This definition enjoys general acceptability because of two related considerations. One, the definition suggests what productivity is thought of to be in the context of an enterprise, an industry or an economy as a whole. Krugman, P. (1990) ‘The Age of Diminished Expectations’ MIT Press, Cambridge, Mass. Two, regardless of the type of production, economic or political system, this definition of productivity remains the same as long as the basic concept is the relationship between the quantity and quality of goods and services produced and the quantity of resources used to produce them (Prokopenko, 1987). Eatwell and Newman (1991) defined productivity as a ratio of some measure of output to some index of input use. Put differently, productivity is nothing more than the arithmetic ratio between the amount produced and the amount of any resources used in the course of production. This conception of productivity goes to imply that it can indeed be perceived as the output per unit input or the efficiency with which resources are utilized (Samuelson and Nordhaus, 1995). By way of analogy, Amadi (1991) explained that an example of productivity ratio is kilometres driven per gallon of petrol where petrol is
the input and kilometers covered constitute the output. However, input measure of petrol is not used to determine the efficiency of the car’s performance. Other related factors such as speed, traffic flow, the engine’s efficiency and the fuel’s efficiency are equally involved in the computation of the input index. The output measure of kilometers driven therefore becomes a gauge of the magnitude or effectiveness of the results achieved. Expressed simply: Productivity = total output/total input which is identical to total results achieved/total resources consumed or effectiveness/efficiency. In effect, productivity becomes the attainment of the highest level of performance with the lowest possible expenditure of resources. It represents the ratio of the quality and quantity of products to the resources utilized. It is evident in the literature on productivity that almost all the definitions of productivity centre on ‘outputs’ and ‘inputs’. Unfortunately, definition of either output or input or both may sometimes pose more difficulty to the understanding of what productivity is. For output, it is in the form of goods if visible and services if invisible. Input on the other hand is less easily defined. Since production (creation of goods and services) is a team effort thereby making the demand for inputs to be interdependent, various elements (inputs) are involved in the production of output. This makes the definition of input more complex than that of output. To ease this problem of defining inputs, it is common a practice to classify inputs into labour (human resources), capital (physical and financial assets), and material. Again, in an attempt to circumvent the difficulty of defining inputs, productivity is sometimes defined as goods and services produced by an individual in a given time. In this sense, time becomes the denominator of output with the assumption that capital, energy and other factors are regarded as aids, which make individuals more productive. Olaoye (1985) observed that productivity as a concept can assume two dimensions: namely total factor
productivity (TFP) and partial productivity. The former relates to productivity that is defined as the relationship between output produced and an index of composite inputs; meaning the sum of all the inputs of basic resources notably labour, capital goods and natural resources. Eatwell and Newman (1991) captioned total factor productivity as ‘multi-factor productivity’. For the latter, output is related to any factor input implying that there will be as many definitions of productivity as inputs involved in the production process whereby each definition fits a given input. For example, when output is associated to per man-hour or per unit of labour, this definition of productivity is a partial one and it relates to labour productivity. Partial factor productivity is equally known as average product. Symbolically, if Y stands for output, and Fi for any individual factor, we have APF = Y/Fi where APF is the average product. It only measures how the output per unit has changed over time, ignoring the contributions from other factors to the detriment of production process reality. NECA2 (1991) observes that it is more common in productivity studies to see Emphasis placed on labour productivity. By coincidence, at the national level, labour productivity translates to what is known as human productivity. It is the type of productivity that affects directly the purchasing power of the population since: National productivity = Gross National product Working Population Theoretically, it goes without saying that there is a link between per capita income of an economy and such economy’s marginal labour productivity. One justification for the special emphasis on labour productivity is perhaps because labour is a universal key resource. The term labour productivity implies the ratio of physical amount of output achieved in a given period to the corresponding amount of labour expended. By implication, productivity here means the physical volume of output attained per worker or per man-hour. However, apprehension exists on the definition
of labour that is suggestive of the fact that labour productivity is an expression of the intrinsic efficiency of labour alone. Indeed, productivity is more of the end result of a complex social process involving science, research, analysis, training, technology, management, production plant, trade union, and labour among other inter-related influences. NECA means The Nigerian Employers Consultative Association. At the level of industry or workshop, other kinds of productivity exist. Notable ones include direct labour cost productivity, capital productivity, direct cost productivity, total cost productivity, foreign exchange productivity, and energy productivity and raw materials productivity among others. To this end, it must be appreciated that the definition of productivity partially is purely to satisfy the demand of theoretical curiosity. Practically, the interdependence nature of the demands for factors implies that it is impossible to say precisely and clearly how much output has been created by any one of the different inputs taken by it. The phenomenon is like attempting to answer the question: which is more essential in producing a baby, a mother or a father? Some common misunderstandings exist about productivity. First, productivity is not only labour efficiency or labour productivity even though; labour productivity statistics are essentially useful policy-making data. Productivity is much more than just labour productivity and needs to take into account other inputs involved in the production process. Two, productivity is not the same as increase in output or performance. Sumanth (1984) described this misconception as the confusion between productivity and production. Output may be increasing without an increase in productivity if, for example, input costs have risen disproportionately. One useful way to combat this misconception is to be conscious of the trend of input costs particularly by relating output increases to price increases and inflation. This approach is often the result
of being process oriented at the expense of paying attention to final results. Bureaucratic settings are more prone to this misconception of productivity. In an attempt to draw the line between productivity and output increase, the term ‘productivity growth’ is sometimes introduced whereby it denotes the rate of growth of the level of productivity. For example, if output per worker is 1000 units in 1998, and it grows to 1250 units in 1999, then it is said that productivity growth was 25% per year on the assumption that prices and input costs are constant. The third misconception about productivity is the confusion between productivity and profitability. Profitability is a function of the extent of price recovery, even when productivity has gone down. Again, high productivity may not always go with high profit if goods and services produced efficiently and effectively are not in demand. Confusing productivity with efficiency or effectiveness can equally cloud the meaning of productivity. Efficiency means producing high-quality goods in the shortest possible time. It is important to ask if goods produced efficiently are actually needed. Also, effectiveness refers more to the production of results. In the private sector for instance, effectiveness could mean making profit and preserving future market share. According to Scott (1983), efficiency and effectiveness are actually measures of performance just as productivity is equally a measure of performance. Another misconception is a mistake of believing that cost cutting always improves productivity. Whenever this is done indiscriminately, it can even bring about productivity decline in the long run. It is equally not to be believed that productivity can only be applied to production. In reality, productivity is relevant to any kind of organization or system including services, particularly information. For example, improved information technology alone can give new dimensions to productivity concepts and measurement. Recent advancement in information technology seems to be suggesting that
labour productivity may actually be subordinate to the productivity of capital and other scarce resources such as energy or raw materials. The concept of productivity is also being linked with quality of output; input and the interacting process between the two. An important element is the quality of the work force, its management and its working conditions as it has come to be In the definition of productivity, efficiency goes with the denominator (input) and effectiveness the numerator (output) noticed that rising productivity and improved quality of working life go hand in hand. In a nutshell, productivity is concerned with efficiency and effectiveness simultaneously. Lawlor (1985) sums up productivity as comprehensive measures of how efficient and effective an organization or economy satisfies five aims: objectives, efficiency, effectiveness, comparability and progressive trends. No matter how it is perceived, productivity implies that there is an incremental gain in what is produced as compared with the expenditure on measures utilized.

2.16 Production and Productivity:

“Production and productivity are often not distinguished at all. Just as the Army is not the Navy and the Navy is not the Army. Production and productivity is not the same thing. Production is the amount of the absolute flow of product during a given period. Productivity is the measure of the efficiency in production of factors inputs and / or factor / input services" the term 'productivity is used with reference to "The relationship between actual inputs and actual outputs. It is primarily measure overtime, comparing the performance this year with previous years and shows the improvements achieved by the organization. Productivity may also be used to compared production faculties or against bench marks". According to international labor organization (ILO) productivity refers to "the effective and efficient utilization of all
resources, capital, land, materials, energy, information, and time in addition to labor” There are few confusions about productivity.

Firstly productivity is not only labor efficiency or labor productivity. Secondly misconception is that it is possible to judge performance simply by input. Third with efficiency means producing high quality goods in the shortest possible time but there are requirement of consideration is those goods are needed. Fourthly cost cutting does not always improvement productivity. "It is the Pivot of all the productive economic activities affecting the cost of production and determining all the variables like the prices, wages, salaries and cost of capital and services” thus, increasing productivity means the increasing efficiency of different resources of production with shortest efforts. In other words, along with increase in quantities of factors and inputs, productivity improvements will also be contributing is additional source of output increase. For any given increase in output, improvement of a higher rate of productivity applied for connotes a saving or economy in the requirements of additional supplies of inputs and factors. Generally it can be said that production is an absolute term and refers to the total value of manufactured goods and provision of services produced during a period. Which aim is to satisfy people's wants where as productivity on other hand denotes as relative terms in relation to the input or resources used in turning out a given amount of output. As well as productivity does not depend upon the increase in production.

2.17 Significant of Productivity

Importance of productivity in contest of the present day competitive world economic environment is the adoption and use of the latest technology and therefore "Productivity is the change in results obtained for the resources expended or productivity change is any alteration in output - input relationships including those resulting from
changes in the production process, changes in the methods of using existing processes, changes in the input proportions or input mix and changes in the rate or scale at which existing processes are utilized" It may be true that "in every country developed or developing with a market economy or a centrally planned economy, the main source of economic growth this an increase in productivity. Inversely slackening of growth stagnation and decline entail or are accompanied by a slow down productivity improvement". Suppose industry is to be the engine of economic growth and modernization as well as competition the chosen paths for improving industrial efficiency, productivity improvements will be the indicators of success. "The National importance of extending economic incentives from standard factory production to services and less standard productive operations is, in the main three fold, there is first the fact that services and underside processes have advanced less in productivity.

Secondly if some operations are paid by piece, others by time, the piece workers are likely to take home much higher earnings than the time workers. Thirdly extending incentive schemes beyond standard factory production lies in the saving of man power". While at the micro level "Productivity finds a prominent place in the business mission of the organization. Discussions revealed that the top Management considers improvements in productivity as vital to the process of developing a competitive edge and generation of adequate internal resources to finance the company's growth"

According to Raman M.V.V. "The importance of Productivity lies into understanding effectiveness and efficiency by providing a basis for doing right things, setting objectives, measurement and control, the significance of technology and management in productivity improvements and role of individual managers, get clarified, leading to
managerial effectiveness. In this sense management gets a dimension encompassing activities in the total economic system & managerial effectiveness its content” Thus, the significance of productivity is increasing each unit to national welfare is now universally recognized fact.

2.18 Relationships of Productivity with Efficiency:

Productivity itself is a sign of efficiency in production. It may be improved when production is carried out with a view to economical manner. Lower productivity shows the waste and inefficiency in the use of resources. High-level productivity results in high level of profits. The sharing level of productivity looks to it that maximum output should take place from whatever minimum input one is engages in the best of a concern depends upon the maximum profit it can draws. According to Gordon K.C. et al., “with due allowances for temporary current value in fluctuations or changes in commodity of product prices there is strong positive correlation among time series data measuring productivity, profitability or efficiency”.

It means that all these measures indicates a rate of growth in capabilities of organization to fulfill their missions namely to produce and distribute more and better products or services by managing the development and application of technology as well as human resources. According to Alan Lawler “efficiency is comprehensive measure of how organization satisfy the effectively resources are used to generate useful output”. Generally efficiency can be measured by taking into account the inputs and outputs and therefore productivity is the efficiency and capacity of producing different articles by the raising the rate of productivity or efficiency of the company one can from an idea about its
production performance. To sum up production performance measures the level of efficiency.

2.19 Concept of Profitability Performance

Simply, profitability is Profit making ability of a business organization, According to Gibson and Boyer “Profitability is the ability of the firm to generate earnings” the word Profitability is modulation of two words ‘Profit’ and ‘ability’ Profit is the bottom line of the financial statement of meaning of Profit derives according to the purposes and usages of figures, While term ‘ability’ indicates the power of the business organization to generate Profits. “Ability” is also referred to as” Earning power or “Operating performance of the concerned investment”.

According to Franks and Broyles “The expected return from the Capital Markets represents an opportunity cost. Since incrementally, companies can employ their funds in the capital market that market provides the appropriate reference point against which to measure profitability. Put another way a profitable investment project is one which provides a return sufficient to attract capital from the Capital Market” while how and up to believes that “The ability of a given investment to earn a return from its use” It may remarked that the ability of Profit making could denote a improved or constant during a specific period In accountancy Profitability may be described as a yard stick of firm performance. It is a relative concept, which regulates and controls over management policy and decisions.

(1) Profitability

The word "Profitability" is modulation of two words "Profit" and "Ability". In another words it referees to "Earning Power" or "Operating Performance" of the concerned Investment. The concept of profitability
may be defined as "The ability of a given Investment to earn a return from its use".  

Measurement of profitability is the overall measure of performance. Profits known as bottom lines are also important for financial institutions. Analyzing and interpreting various types of profitability ratios can obtain creditor’s performance of profitability.

(2) Fixed Assets

"Generally fixed assets known as non liquid and long term property element” The fixed assets concern with that part of capital include all the tangible as well as intangible property. The tangible assets refer to productive assets like plant, machinery, tools and other facilities. "Which are used in carrying on productive activities of a business enterprise".

The amount invested in fixed assets is realized gradually from each unit of sales made during the life span of the assets. The performance of fixed assets is shown through interpretation of fixed assets structure, impact of gross block on sales and operating profit margin, average annual growth and efficiency in the use of fixed assets.

Fixed assets by the nature, are long term tangible assets, therefore they should be financed through the long term sources of funds in the case of ratio of fixed assets to net worth it can be analyzed to study financing of fixed assets and this ratio is very important as it shows that owners have granted enough funds to finance fixed assets.

2.20 Measurement Tools of Financial Efficiency:

For taking policy decision under different situations, measurement of Profitability is essential. According to Murthy V. S. “The most important measurement of Profitability of a company is ratio i.e. profitability of assets, variously referred to as earning power of the company, return on total investment or total resources committed to
operations”. Profitability ratios are calculated to measure the operating efficiency of the firm. According to Block and Hirt “The income statement is the major device for measuring the Profitability of a firm over a period of time.” Measurement of profitability is as essential as the earning of profit itself for the business concern. Some managerial decisions like rising of additional finance, further expansion, and problems of bonus and dividend payments rest upon this measurement. It can be measured for a short term and as well as for a long term. The relation to sales is the good short-term indication of successful growth while profitability in relation to investment is the successful growth while profitability in relation to investment is the healthier for long turn growth of the business. Profitability provides overall performance of a company and useful tool for forecast measurement of a company’s performance. “The overall objective of a business is to earn a satisfactory return / Profit on the funds invested in it, while maintaining a sound financial position. Profitability measures financial success and efficiency of Management” The importance of analysis of profitability performance can see from the reality that besides the management and owners of the company, financial institutions, creditors, and bankers also looks at its Profitability. Appraisal of performance as regards to profitability can be drawn from interpreting various ratios.

However there are few factors affecting to the firm’s Profitability. Each factor in turn will affect the Profitability ratios. In present study profitability ratios can be measured through two groups’ i.e. Profitability ratios in relation to capital employed. The examples of sales based profitability ratio are Net Profit ratio, operation ratio and gross profit ratio and in relation to Capital employed profitability ratio are Earning per share, Return on Capital employed and Return on owners equity of the company will be discussed below:
Profitability Ratios in Relation to Sales:

(1) Gross Profit Ratio:

“The excess of the net revenue from sales over the cost of merchandise sold is called gross profit, gross profit on sales or gross margin”

This ratio is calculated by dividing the gross profit by net sales and is usually expressed as a percentage. The formula of gross profit ratio is given below:

\[
\text{Gross Profit Ratio} = \frac{\text{Sales} - \text{Cost of Goods Sold}}{\text{Sales}} \times 100
\]

The gross profit ratio highlights the efficiency with which management produces each unit of product as well as it indicates the average spread between the cost of goods sold and the sales revenue. Any fluctuation in the gross ratio is the result of a change in cost of goods sold or sales or both. A high gross profit ratio is a mark of effectiveness of management. The gross profit ratio may increase due to any of the below factors:

(1) Lower cost of goods sold where sales prices remaining constant
(2) Higher sales prices where cost of goods sold remaining constant
(3) An increase in the proportionate volume of higher margin items.
(4) A combination of variations in sales prices and costs. While in the case of low gross profit ratio it may reflect higher cost of goods sold due to firm’s inability to purchase at favorable terms, over investment
in plant and machinery etc. secondly this ratio will also be low due to a decrease in prices in the market.

(ii) Net Profit Ratio:

Net Profit is obtained when operating expenses; interest and taxes are subtracted from the gross profit. It indicates that the portion of sales is left to the proprietors after all costs; charges and expenses have been deducted.

Net Profit ratio is differ from the operating Profit to Sales Ratio in as much as it is computed after adding non-operating surplus / deficit. (Difference of non-operating incomes and non-operating expenses). The net profit ratio is measured by dividing profit after tax by Net Sales:

\[
\text{Net Profit Ratio} = \frac{\text{Profit after tax} \times 100}{\text{Net Sales}}
\]

Net profit margin ratio establishes a relationship between net profit and sales and it indicates management efficiency in Administering, manufacturing and selling the products. This ratio is the overall measure of the firm’s ability to turn each rupee sales into net profit. While the net profit is inadequate, the Firm will fail to achieve satisfactory return on owner’s equity due to various reasons. Such as (I) Falling price (ii) rising costs and declining sales Thus, this ratio is very useful to the proprietors and widely used as a measure of overall profitability.

Profitability in Relation to Capital Employed:

Earning Per Share (EPS)

Earning per share is widely method of measuring profitability of the common shareholders investment it measures the profit available to
the equity shareholders on per share basis. The earning per share is calculated by dividing the profit after taxes by the total number of common shares outstanding.

**Profit after Tax**

\[
\text{Earning Per Share} = \frac{\text{Profit after Tax}}{\text{Number of Equity share outstanding}} \times 100
\]

The earnings per share calculations made over years shows whether or not the firms earning power on per share basis has changed over that period. “The earnings per share simply show the profitability of the firm on a per share basis. It does not reflect how much is paid as dividend and how much is retained in business but as a profitability index. It is a valuable and widely used ratio” Thus, the profitability of common shareholder’s investment can be measured easily by earning per share.

**Return on Capital Employed:**

Return on capital employed often called as ‘Return on investment’ “Return on capital employed may be approximated by a fraction. The bottom-line should represent the average amount of capital employed and the top line would represent an average of accounting earnings from the projects.” Generally, it is known about the rate of return on investment (ROI) or equivalently rate of return on assets. This ratio is computed by dividing net earnings net earnings by total assets.” This ratio is computed by dividing net earnings by total assets.” This ratio is calculated as follows:

\[
\text{Return Capital Employed} = \frac{\text{Profit after tax}}{\text{Capital Employed}} \times 100
\]
Above formula gives the conventional approach of calculating Return on investments where investment represents pool of funds supplied by the shareholders and lenders. While profit after tax represents residue income of shareholders, therefore it is conceptually unsound to use profit after tax in the calculation of return on investments (ROI).

**Return on Owners Equity:**

Return on owner’s equity is also known as return on shareholder’s equity. This ratio shows how the firm will have used the resources of owners. It may true that this ratio is one of the most relationships in financial analysis. The return on owner’s equity is calculated by following formula.

\[
\text{Return on Owners Equity} = \left( \frac{\text{Profit after Tax}}{\text{Owner’s equity}} \right) \times 100
\]

\[
\text{Profit after Tax}
\]

\[
\text{Return on Owners Equity} = \text{----------------------} \times 100
\]

\[
\text{Owner’s equity}
\]

Where, owners equity = share capital + reserve & surplus.

This ratio indicated the extent to which this objective has been fulfilled. This, ratio reflects great interest to present as well as prospective shareholders and also important for management, because management has responsibility of maximizing the owners wealth in the market place. This ratio would be compared with the ratios for other similar companies as well as the industry average. Thus, it shows the relative performance and strength of the company.

**2.21 Evaluation Methods :**

A study of Performance efficiency through productivity, financial efficiency and operational efficiency is made by using the followings tools and techniques.
1. **Ratio Analysis**

Ratios analysis is the process of determining and presenting in arithmetical terms the relationships figures and groups of figures drawn from these statements. A ratio expresses the results on the basis of comparison of two figures in numerical terms.

A ratio is a statistical yardstick that provides a measure of relationship between two accounting figures. According to batty “Accounting ratios describe the significant relationship which exists between figures shows on a balance sheet in a profit and loss account in a budgetary control system or in any of the part of accounting organization.” The ratio is customarily expressed in following ways:

1. It may be obtained by dividing one value by other. This expression is known as “Times”.
2. If hundred then the unit of multiply the above expression becomes percentage.
3. It may be expressed in the form of “proportion” between the two figures or known as pure ratio.
4. It may also be depicted in the form of graphs like ratio graph.

**Importance:**

A ratio is known as symptom like blood pressure. The pulse rate of the temperature of an individual often ratio analysis is used as a devices to diagnose the financial position of an enterprise. It shall point out if the financial condition is very strong, good, partly good, poor. As such the ratio analysis is a powerful tool of financial analysis through it economic and financial position of a business unit can be fully x-rayed.

Ratio analysis becomes meaningful to judge the financial condition and profitability. Performance of a firm only when there is comparison of present in fact analysis involves two types of comparison. First a
comparison of present ratio with past and expected future ratios for the same firm, the second method of comparison involves comparing the ratio of the firm with those of similar firms of with industry average at the same point of time.

Further “Ratio analysis” presents the figures in which the net result of the financial position and problems is concentrated. They provide a co-ordinate frame of reference for the financial manage. They tell the entire story of the ‘Financial adventures of the enterprise as heap of financial date are buried them. They simplify the comprehensive of financial statistics.

On the basis of above it may be concluded that ratios are very important for interpretation as they give valuable and very useful information about business.

**Limitations:**

Every flower of rose has its own beauty in spite of numberless thorns in the same way ratio analysis has a variety of advantages, though it is not free from limitations, some of which are as below:

1. The formula for calculating each ratio is not well standardized.
2. No standard ratios are available for evaluating the significance of each ratio.
3. Ratio ignores non-monetary factors like general economic climate, government and management policies, which vitally affect the financial health of the enterprises.
4. If too many ratios are calculated, they are likely to confuse, Instead of revealing meaningful conclusions.
5. The ratios are generally calculated from the past financial statement and thus, are no indicators of future.
6. Ratios are not exact measure of financial situation as the balance sheet and profit and loss account are based on accounting conventions, personal judgments and recorded facts.

As Ratios are simple to calculate, there is a tendency to over employ them, which lead to accumulation of mass data. However significant the ratio may they cannot replace business efficiency and decision - marking. They do not provide mechanical solution to business problems.

**Classification of Ratio:**

Some writers have described that there are as many 42- business ratios. First of all it is necessary to ascertain the ratios for a particular study. The financial ratios may be classified in the various ways. If the nature and objective of calculating each ratio is given then the customary and convenient classification from the point of view of management and investors will be:

(A)**Liquidity Ratio**

These ratios throw the light upon the liquidity position of a concern the main ratios are:

1. Current ratio
2. Liquid ratio or quick ratio or acid ratio
3. inventory to working capital ratio
4. Working capital turnover ratio
5. Debtor turnover ratio
6. Average debt collection period

(B)**Productivity Ratio**

1. Output to input ratio
2. Input to output ratio
(C) Profitability Ratio

These ratios X ray the profit making ability of the enterprise. They may calculate either on the basis of operating profit or net profit. These ratios are of two types first related to sales and second profitability. The main efficiency ratios are

1. Gross profit ratio
2. Operating ratio
3. Net profit ratio
4. Return on gross capital employed
5. Return on net capital employed
6. Return on net worth

(D) Activity Ratio

Activity ratio expressed how efficient the firm is managing its resources. These ratios express relationship between the level of sales and the investment in various assets. The import and commonly used activity ratios are as under:

1. Total assets turnover ratio
2. Fixed assets turnover ratio
3. Current assets turnover ratio
4. Capital turnover ratio

(E) Financial Structure Ratio

These ratio highlight the management policies regarding trading on equity. These more important ratios concerning capital structure is given below.

1. Long term debt equity ratio
2. Total debt equity ratio
3. Interest coverage ratio
4. Fixed assets to capital employed
5. Capital gearing ratio
6. Proprietary ratio
7. Net fixed assets to net worth ratio

[2] TREND ANALYSIS

Trend analysis technique is useful to analyze the firm financial position and to put the absolute figures of financial statement in more understandable form over a period of years. This indicates the trend of such variable as sales cost of production, profit assets and liabilities.

The different approaches of trend analysis are as follows.

1. Common size vertical analysis
2. Common size horizontal analysis
3. Trend analysis helps the analyst and management to evaluate the performance, efficiency and financial condition of an enterprise.

(i) Common Size Vertical Analysis

All the statement may be subject to common size vertical analysis a figure from the same year’s statement is compared with the basic figure selected from the statement should be converted into percentage to some common base. The common size vertical income statement and balance sheets of selected companies of fertilizer industry covered by this study are given in the study.

(ii) Common Size Horizontal Analysis

When asking horizontal analysis, a figure from the account is expressed in terms of same account figures from selected base years. It is calculation of percentage relation that each statement then bears to the same item in the base year. Horizontal analysis can help the analysis to determine how an enterprise has arrived at its current position.

The technique of common size statement is very useful when we wish to compare the performance of the industry for presentation of the
data in percentage from since it eliminates problems relating to differences in organization size.

[3] **Comparative Statement Analysis:**

Statement prepared in a form reflecting financial data for two or more periods are known as comparative statement. The data must first be properly set before comparison in the preparation of comparative financial statement uniformity is essential otherwise comparison will be vitiated. Comparative financial statement is very useful to the analyst because they contain not only the data appearing in a single statement but also information necessary for the study of financial and operating trends over a period of a year. They indicate the direction of the movement in respect of financial position and operating results. Comparison of absolute figure has no significance if the scale of operation of one company is much different from that of others.

(i) **Comparative Balance Sheet**

Increase and decrease in various assets and liabilities as well as in proprietor’s equity or capital brought about by the conduct of a business can be observed by a comparison of balance sheets at the beginning and end of the period. Such observation often yield considerable information, which is of value informing an opinion regarding the progress of the enterprise and in order to facilitate comparison a simple device known as the “comparative balance sheet” may be used.

(ii) **Comparative Income Statement**

As income statement shows the net profit or net loss resulting from the operations of a business for designated period of time. A comparative income statement shows the operating result for a number of accounting periods so that changes in absolute data from one period to another may be started in terms of money and percentage. The comparative income
statement contains the same columns as the comparative balance sheet and provides the same type of information.

As the income statement presents the review of the operating activities of the business and the comparative balance sheet shows the effect of operation of its assets and liabilities. The latter contains a connecting link between the balance sheet and income statement. Income statement and balance sheet are contemporary documents and they highlight certain important facts.


The balance sheet is in the nature of a showing the position of a firm at a particular moment of time. The business process is very dynamic with transactions occurring regularly, each of which affects in some way, the immediately preceding financial position. A balance sheet therefore, merely provides the picture of a fleeting condition at a point of time and if balance sheets drawn at different time are compared any different pound between the closing and beginning figures would be the result of various transaction taking place during the interim period. The business process involves a continuous inflow and outflow of funds. This funds flow analysis helps the analysis to appraise the impact of the management’s decision on the business during a given period of time.

[5] Other Techniques of Analysis

Several other techniques like cash flow analysis and break even analysis are also some time useful for analysis. The use of various statistical techniques is also used frequently for financial analysis, providing a more scientific analysis. The tools generally applied are moving average, index number, range, standard deviation, correlations, regression and analysis of time series.

Diagrammatic and graph orientations are often used in financial analysis. Graphs provides a simplified way of presenting the data and
often give much more vivid understandable of trends and relationships. Pie graphs bar diagrams and other simple graphs are often used for financial analysis.

2.22 Significance of a Study:

The above study is made for the point of all live participants who are interested in the routine of the business organization. Those are as under.

(1) Management Point of View:

The above study plays vital role in providing such information to the management, which needs for planning decision-making and control e.g. operational efficiency analysis provides gross profit, operating expenses analysis and profit margin. Asset management outlines asset turnover, working capital under inventory turnover, accounts receivable and payable profitability position shows return on assets, earning before interest and taxes (EBIT), and return on assets. Gesternberg stated that “management can measure the effectiveness of its own policies and decisions, determine the advisability of adopting new policies and procedures and documents to owners as result of their management efforts”

(2) Important to Investor:

According to Erich A.Helfert “Importance of performance lies for owners/potential investors should know easily. The financial position of the company by return on net worth, return on common equity, Earnings per share, Cash flow per share, Dividend yield, dividend coverage, Price earning ratio, market to book value, Pay out/retention”. The potential investors of the business organization in turn are interested in the current features.
(3) Creditors Point of View:

Creditors doing business with company simply study its performance by current ratio, acid test ratio, and debt to assets, equity and capitalization, interest coverage and principal coverage before lending the finance. The study of these describes real features of business organization to the creditors.

(4) Government Point of View:

Government has significance to study liquidity productivity and financial efficiency of an individual organization or industry as a whole. Various. Taxes, revenues, financial assistance, sanctioning, subsidy, to a business organization or industry as well as price fixing policies, frame outlines the key role of study for the Government lies in planning, decision making and control process.

(5) Employees and Trade Unions Point of View:

Employees are resources of the company and are interested to know the financial position and profit of the company. Generally they analyze by the comparison between past and present performance, profit margin and cash flow of the company. Trade unions are interested to know the data of financial performance pertaining to their demands for increase in wages, salaries, facilities, and social welfare.

(6) Society and Others:

Society and others are including in external environment of the company and every business organization has a greater responsibility towards society.

In this context performance should be studied through various types of social elements such as customers investors, media, credit institutions, labour bureaus, taxation authorities, economists are interested for the study of a business organization while society as whole
also looks forward to know about the social contribution, i.e., environmental obligations, social welfare etc.
References:
1. Author's Article, "Financial Appraisal of State Ware-housing Corporations: A Case Study of Rajasthan State Ware housing Corporation, “Lok Udyog, XVI (September 1982,) 5-6.
3. Ibid. p. 25.


16. Souvenir published at IV conference of Asia and pacific accountants, New Delhi, 1965, I P 143


18. Eric L Kohler, A dictionary for accountants (Indian reprint prentice hall of India pvt. 1978)

19. R.K. Gupta “Profitability financial structure and liquidity”, print well publisher-Jaipur-1990 p.31

20. Harold W. Stevwnsion & J. russel Nelson, “Profit in the modern economy” Vora & co. publisher pvt. Ltd. 3 round building, Bombay-21969, p.74


22. John n. Mayur, Financial statement analysis, prentice hall of India, New Delhi, 1974, p.178

23. CHOWDHARY S.B. “ Analysis of company financial statement” Asia publishing house, a964. p-71