CHAPTER II

INCENTIVES AND LABOUR PRODUCTIVITY-A

THEORETICAL PERSPECTIVE

In the modern economy 'work' is considered as 'worship'. In this process the workers are considered as the vital forces. The organisational efficiency to a large extend is dependent on the efficiency of labour. The major determinants of labour efficiency are the personal skills and capabilities of the worker, the work facilities and work environment, and the motivational inputs provided to them. But all these determinants are affected in one way or the other by the organisational process. Therefore, labour efficiency itself is dependent on organisational efficiency.

The organisational efficiency is dependent on technological factors and various non-technological factors such as, the nature and effectiveness of work process, functional practices, the management of labour resources and the overall administration of the firm, etc. A combination of all these factors is essential for the improvement of over all productivity of the organisation.

The effectiveness of the non-technological factors of productivity improvement will depend firstly, on the efficiency of designing them and, secondly, on the efficiency of labour which operates them. The impact of the first determinant is direct. The second determinant, viz., labour efficiency, depending on the organising skills of the firm, the rewards, promotion system, inter-personal communication network or job content may motivate the workers
to work attentively, so as to improve the results on other aspects. Again the actual technical efficiency is dependent on a combination of factors such as the non-technological and labour efficiencies in addition to the ideal technical efficiency itself.

Now, it is clear that the productivity is dependent on non-technological, labour and actual technical efficiencies of the organisation. Now the question arise, among these factors which is more important. It is very difficult to answer the question. As far as an organisation is concerned all the factors are vital. However, the better use of human resource has been perceived as a crucial factor for stepping up productivity. As pointed out by Mr. Bain D (1982), people, being the highest order of resources, are responsible for controlling and husbanding all other resources; they design and operate equipments and facilities; they design and implement methods and procedures; they purchase and use materials; and so on (p.28).¹

However, the better utilisation of human resources requires a marked stress on various incentives and their motivating power. As a matter of fact, Anita (1993) notes that, in the Indian context during the 1970s and the 1980s unsatisfactory labour-management relations had adversely affected productivity of public enterprises.² Various researchers expressed the view that the technological factors are the vital factor in the productivity improvement. Here, they forget to consider the human being behind this technology. So the productivity is mainly dependent on the labour efficiency. And for the labour
productivity, requires a pronounced stress on various incentives and their motivating power.

**The pivotal position of Labour**

The importance of incentive payment has increased considerably especially in developing countries. They realised the fact that in order to increase the productivity it is required to provide adequate incentives to the employees. The origin of Incentive Schemes is contemporary to that of Scientific Management. It is one of the early techniques used by management for increasing productivity and so Incentive Schemes have ever been a matter for much discussion, debate and criticism. It is no doubt that the manpower of all types being the fundamental resource of industry, its effective organisation and control remains the prime task of those responsible for production.

Some managers are of the view that output is given by the machine and it is the modernity of the machine that governs productivity. This is not correct. In any industry the factors of production can be stated as; (a) the land and buildings; (b) the machinery and equipment; (c) the raw materials for production and other material inputs (auxiliaries); and (d) the human labour force. Among these, the inanimate ones, namely, the land and buildings, the plant and machinery and the raw materials lend themselves for exploitation at the hands of the animate one- the human labour. Even if a plant has but one employee, that employee’s satisfactory performance is very important to the proper functioning of the machinery and equipments; and of course, in a company with many
employees and little automation, productivity is likely to be determined largely by what the employees, rather than the machines, do.

Increased utilisation of a given set of assets depends greatly on the ability and will of human labour force and therefore motivation of the human labour force for more work forms the central problem of industry. The greater the amount of capital sunk by an enterprise in the fixed assets, the more urgent is the need to motivate the labour for their utilisation.

From the above discussion, it is clear that for increased productivity, human contribution is vital. This human contribution is considered to result from ability and motivation. Ability is deemed to result from knowledge and skill. Knowledge is derived by education, experience, training and interest. Skill is affected by aptitude and personality, as well as by education, training, experience and interest. While selecting an employee due care should be taken in measuring the ability of the employee to do a particular work.

Especially in Kerala, the appointment of over qualified persons is common. Due to lack of employment opportunities they are forced to select a job below to their expectations. Higher educational levels means increased strength of egoistic and status needs, along with higher levels of aspirations. An over qualified employee may have the ability to do the work. Even though, their efficiency would be low because the job may be below to their expectations.

**Motivation**

Human contribution to Productivity is largely dependant on motivation. Highly motivated people will work more efficiently. That means high
motivation is a means to higher productivity. The motivated people will proceed purposefully towards the achievement of their own goals and those of the organisation. The process of motivation is initiated by someone recognising an unsatisfied need. A goal is then established which, it is thought, will satisfy the need, and a course of action is determined which is expected to lead towards the attainment of the goal and the satisfaction of the need. The cycle is continuous because as one need is satisfied another will arise.

In a developing country like ours, especially in Kerala’s Public Sector Undertakings, the most important motivating factor is rewards. So reward management is very important for satisfying the needs of the employees. The employees are motivated by rewards and incentives which will enable them to satisfy their needs. If an individual does not have a need, he will not do any work. Need is the base of motivation.

Types of Motivation

The motivation at work can take place in two ways:

1) Intrinsic motivation: derived from the content of the work. Intrinsic Motivation is self-generated in that people seek the type of work that satisfies them, but the management can enhance this process through its empowerment, development and job design policies and practices. The factors affecting intrinsic motivation include responsibility (feeling the work is important and having control over one’s own resources), freedom to act, scope to use and develop skills and abilities, interesting and challenging work and opportunities for advancement. and
2) Extrinsic motivation: This is what is done to and for people to motivate them. It arises when management provides such awards as increased pay, praise or promotion.

Among these, the intrinsic motivators are likely to have a deeper and longer-term effect because they are inherent in individuals and not imposed from outside, although they may be encouraged by the organisation. The extrinsic motivators can have an immediate and powerful effect, but it may not have longer terms effect.

**Basic Concept of Motivation**

The basic concepts of motivation are concerned with needs, goals, reinforcement, expectations, attribution and equity.

**Needs**

Needs theory states that behaviour is motivated by unsatisfied needs. The key needs associated with work are those for achievement, recognition, responsibility, influence and personal growth.

**Goals**

Goal theory was developed by Latham and Locke on the basis of a fourteen year research programme into goal-setting as a motivational technique. The theory suggests that motivation can be increased by goal-setting processes with the following characteristics:

- the goals should be specific
- they should be challenging but reachable
- they are seen as fair and reasonable
individuals participate fully in goal-setting

feedback ensures that people get a feeling of pride and satisfaction from the experience of achieving a challenging but fair goal

feedback is used to gain commitment to even higher goals.

Reinforcement

Reinforcement indicates that successes in achieving goals and rewards act as positive incentives and reinforce the successful behaviour, which is repeated the next time a similar need arises.

Expectancy Theory

This theory states that motivation takes place when individuals:

- feel able to change their behaviour
- feel confident that a change in their behaviour will produce a reward
- value the reward sufficiently to justify the change in behaviour.

Expectancy theory explains why extrinsic motivation-for example, an incentive or bonus scheme-works only if the link between effort and reward is clear and the value of the reward is worth the effort. It also explains why intrinsic motivation arising from the work itself can sometimes be more powerful than extrinsic motivation. Intrinsic motivation outcomes are more under the control of individuals, who can place greater reliance on their past experiences to indicate the extent to which positive advantageous results are likely to be obtained by their behaviour.
Attribution Theory

Attribution theory is concerned with how people interpret and explain their success or failure. If they can attribute their achievement or lack of achievement to something over which they have control they are more likely either to repeat their successful behaviour (this is a form of reinforcement) or, alternatively, take steps to behave in ways they believe are more likely to succeed.

Equity

To be equitable and therefore to motivate, or at least not to de-motivate, pay must be felt to match the level of work and the capacity of the individual. In other words, to be effective, a rewards system must be felt to be fair. This is often called the ‘felt-fair’ principle.

Implications of Motivation Theory

Motivation is a complex process. So there are no simplistic solutions is available for increasing the motivation. The motivation theory conveys the following messages:

1. Individual needs and aspirations are almost infinitely variable.
2. To motivate people it is necessary to use both intrinsic and extrinsic motivating factors. But it is impossible to generalise on what the best mix of these is likely to be.
3. Reward expectations will vary greatly amongst individuals according to their previous experiences and perceptions of reward processes.
4. To motivate people it is simply necessary to spell out to them what they have to do and what will happen if they don’t do it.
5. Money is a key motivating factor.

6. Motivation is a matter of setting and agreeing demanding but achievable goals.

7. Self-efficacy - the differences in the degree to which people believe in themselves. Pay may well be the best motivator but it is only fully effective if the reward people expect to get is worthwhile and they feel they can achieve it.

8. Praise (recognition of achievement) is one of the most powerful motivators.

9. Irrespective of the size of their rewards, people will be de-motivated if they feel that the pay system is unfair.

10. The social context where the influence of the organisation culture, managers and co-workers can produce a wide variety of motivational forces which are difficult to predict and therefore to manage.

From the above discussion it is clear that for higher productivity high motivation is required. For high motivation adequate rewards system is essential. The organisation should provide for a mix of various types of intrinsic and extrinsic motivation and make use of both financial and non-financial incentives. But it should be borne in mind that no reward offered through an incentive, bonus or performance-related pay scheme will be effective as a motivator unless individuals believe it is worthwhile and they can reasonably expect to obtain it through their own efforts.

**Physiological Theories and Remuneration**

The physiological theories of motivation are based on the presence of a set of innate needs within each individual. The behaviour of all human beings,
irrespective of their age, sex or cultural background, is influenced by the presence of innate needs - they are motivated to satisfy or fulfil their natural physiological needs. The remuneration could only serve to improve or increase employee motivation if the provision of additional aspects of remuneration would assist in the satisfaction of these innate needs.

Maslow’s need hierarchy theory says that remuneration could help to satisfy needs in each level of the hierarchy. At the lowest level, remuneration in the form of cash could help to satisfy the hunger needs. At the second level, remuneration again in the form of cash could help to satisfy safety needs by purchasing safety equipments and so on. In each level of the hierarchy, it is therefore possible that remuneration could assist in the fulfilment of certain needs.

Alderfer’s ERG theory of motivation has many similarities with Maslow’s hierarchy of needs in that people is motivated to fulfil a series of innate needs. ERG theory says that remuneration could help to satisfy needs in each of the three sets of needs – existence, relatedness and growth.

McClelland’s theory of motivation suggests the presence of three innate needs which are of primary importance: the need for achievement, the need for affiliation, and the need for power. In this theory although the relationship between remuneration and motivation is not as clear as it is in Maslow’s and Alderfer’s theories, however, if remuneration could be shown to assist an individual in the fulfilment of any of the above three innate needs, its use could be of significant importance.
McGregor's Theory X/Theory Y stresses the importance of factors such as worker involvement, recognition and achievement in much the same way as Herzberg. As a result, it is unlikely that remuneration has a significant role to play since the emphasis is on participative management.

In Herzberg’s two factor model of motivation, remuneration is not considered as a motivating factor. It is considered as a factor which requires being appropriate in order to avoid dissatisfaction. He called money as a ‘hygiene factor’. At the same time he agrees that remuneration can play a role in successful motivational schemes.

A careful evaluation of the above theories reveals that a well-designed remuneration strategy could be an important factor in the motivation of employees. The assumption would be that the employees will behave in a manner which will result in a remunerative reward which in turn will assist in the fulfilment of an innate need. But it is difficult to establish an adequate remuneration which is capable to satisfy the innate needs of an individual.

Cognitive Theories and Remuneration

The central feature of the Cognitive theories is a rational and conscious process which evaluates the outcome of action. Cognitive theories say that remuneration will only be useful if the provision of remuneration is valued highly. The Cognitive theories such as, Tolman’s Expectancy Theory of Motivation and Vroom’s expectancy, valence and instrumentality theory of motivation, suggest that individuals are motivated by the outcome of specific actions - such outcomes being assessed by a rational and conscious process. If
the outcome of an action is considered to be valuable, such behaviour will be repeated. If, however, the outcome of an action is not considered to be valuable, or not valuable enough, the behaviour will tend not to be repeated.

In relation to the use of remuneration, the Cognitive theories consider value of remuneration to the individuals. If the individual values remuneration highly, whether it in the form of cash or some other remunerative benefit such as a company provided residential accommodation, they will be motivated to behave in a way that remunerative benefits will be received. If, however, the individual does not value remuneration highly, they will not be motivated by the offer or lure of remunerative benefits.

**Social/Behaviourist Theories and Remuneration**

Both social/behaviourist approach and cognitive approach to motivation, at first glance, may be considered to be identical. Both approaches refer to the outcome of behaviour as being the important aspect of motivation. But the cognitive approach relies on a rational and conscious decision making process, whereas the social/behaviourist approach relies on an automatic stimulus-response framework.

In social/behaviourist theory of motivation, the use of remuneration is depends on whether the employee considers remuneration to be a reward. The theory suggests that if specific forms of behaviour are reinforced with a remunerative reward which is highly valued, such behaviour will be repeated. On the other hand, if no remunerative reward is provided, or is not considered to be highly valued, such behaviour is unlikely to take place. It is therefore clear
that if the social/behaviourist theory is accepted, and remuneration is the chosen way to motivate employees, specific forms of behaviour should be reinforced by a highly valued remunerative reward.

**Incentives and Incentive Scheme**

The basic premise underlying incentive wage schemes is that money can be used to induce effort on the part of the employees. The objective of inducing the effort means improving the productivity. It is a fact that especially in public sector undertakings, there is a wide gap between the current and the potential levels of efficiency of workers. Incentives offer comparatively an easy way of tapping this potential. The monetary and non monetary incentives provide an inducement to workers to increase the rate of effort.

Incentives are also called ‘payment by results’. The payment of incentives may be based on productivity, sales, profit, or cost reduction efforts by the employees. It is found that, most of the Public Sector Undertakings based the payment of incentives as profit. It can be seen that in some cases profit will be high even though there is no increase in productivity. So it is not healthy for the company to provide incentives without an increase in productivity.

The Study Group appointed by NCL defines ‘wage incentives’ as extra-financial motivation. A wage incentive scheme has been described as “payment for work of an acceptable quality produced over and above a specified quantity or a standard”. An incentive scheme is introduced to induce the worker to move to an acceptable level of performance, on the promise of increased wages. The incentive scheme should take into account different factors like adequacy of the
additional income, the constancy of these earnings and the time gap before the worker is able to collect his incentive wage; he may have immediate need for it, or may have allocated it for a specific purpose. An incentive scheme, however, cannot be a substitute for good management. For the success of an incentive scheme the role played by the management is more important.

**History of Incentive Payment**

The History of paying, or remunerating, individuals for their labour is not new; it was in existence from the very beginning itself. In the Holy Bible, the first book, Genesis 29:15 says “just because we are relatives is no reason for you to work for me without pay”. Here, it is clear that even if the employer and employee are relatives, the employee is eligible for wages.

In the earlier days the wealth was concentrated in a few hands and so the people work for their daily food. The workers were treated as slaves and they were forced to do work and they were not properly rewarded. With the fear of loosing the job the workers were not demanding adequate rewards. The introduction of unionism in work places paves the way to collective bargaining for adequate rewards.

The practice of paying on the basis of performance has been present in various forms for several hundred of years. The main developments in Performance Related Remuneration have occurred since 1900. During the time, the employees are remunerated in one of two ways, remuneration based on the hours worked or an incentive basis. The main problem with the time based
reward system was that two workers could be paid identical amount even though their efficiency differed significantly. This causes in an overall low level of production and employee performance.

In order to improve the employee performance and thereby higher labour productivity, some employers adopted a system of Performance Related Remuneration (PRR) – an incentive based system of remuneration to employees. In this system the remuneration is based on the efficiency of the worker. An efficient worker can earn more and it will be a motivating factor for the inefficient worker to work better.

After the First World War, there was a spurt of activity regarding the use of incentive schemes as the base for remuneration system. Such developments were, however, cut short by the depression of the early 1920s. Further use of incentive based remuneration system occurred around the late of 1920s but this again was affected by depression in the 1930s.

After the Second World War, large scale use of incentives as a base for remuneration system started to occur. The trend towards the use of incentive based remuneration was closely associated with the development, power and influence of personnel departments with in the organisations. There by the influence of personnel managers on organisation policy has increased. Such increased influence affected the introduction, development, utilization and overall effectiveness of incentive based remuneration systems.

In India, labour was one of the neglected subjects under foreign rule. So after independence labour welfare became the primary responsibility of the
State. The First Factory Act of 1881 was amended in September 1948 removing the defects revealed in the administration of the Act so far regarding the provisions for the safety, health and welfare of workers. The first and second Five Year Plans recommended the introduction of incentive systems to promote more efficient working in industries with due safeguards to protect the interest of workers, through the guarantee of a minimum wage and protection against fatigue and undue speed up.

The Second Plan also recommended that earnings beyond the minimum wage should be related to results and workers should be consulted before a system of payment by results was introduced in an establishment. The Third Plan emphasized the need for higher productivity and reduction in the unit cost of production. It put the responsibility on management to provide the most efficient equipment, correct conditions and methods of work, and adequate training and suitable psychological and material incentives for workers.

In the subsequent Five Year Plans also gave importance for incentives schemes and productivity improvements. At present, in order to increase the labour productivity, various forms of incentive schemes have introduced.

**Definitions of Incentives**

Cambridge International Dictionary of English defines incentives as “something which encourages a person to do something. Our bonus payments for improved productivity provide an incentive to work harder”.
Riverside Webster’s II New College Dictionary defines incentives as “something, as the fear of punishment or the expectation of reward that incites one to action or effort”.

In the words of P. Sargent Florence an incentive scheme involves “giving a worker an opportunity to earn something more in exchange for more productivity”.

Hummel and Nickerson use the term wage incentive to refer to all plans that provide extra pay for extra performance in addition to regular wages for a job.

The study group on “Productivity and Incentives” appointed by the National commission on Labour, defines “Wage incentives” as extra financial motivation. In this sense it is designed to stimulate human effort by rewarding the person, over and above the time rated remuneration, for improvements in the present or targeted results.

G.K. Suri defined a Wage Incentive scheme is essentially a managerial device of increasing workers’ productivity.

From the above definitions it is clear that the incentives are meant for attaining higher productivity.

**Objectives of Incentives**

The main object of introducing incentive, as far as the organisation is concerned, is for getting maximum productivity. However, the objectives of incentive schemes can be to:
1. **Compete** in the job market – attract and retain high quality people.

2. Motivate – in order to achieve superior levels of performance people should be motivated. An incentive is for motivating the people.

3. Increase commitment – The incentives enables the members of the organisation to develop a strong belief in the organisation and identify with its mission, strategies and values.

4. Encourage value-added performance – achieve continuous improvement by focusing attention on areas where the maximum added value can be obtained from improved performance and by getting people to agree to demanding goals in those areas which match their capability.

5. Enhance quality – help to achieve continuous improvement in levels of quality and customer service by supporting such processes as Total Quality Management (TQM).

6. Promote team working – Group incentive schemes assist in improving co-operation and effective team working at all levels.

7. Achieve fairness and equity – if the incentives are providing on the basis of the contribution of the workers.

8. Support managers – provide them with the authority and skills needed to use rewards to help them achieve their goals. It is necessary, however, to ensure that managers have a strong framework of guiding principles and procedures, within which they can play their part in managing rewards for their staff with whatever guidance they may need.
9. Encourage flexibility – help to achieve the most efficient use of human resources through job-based, skills-based, and organisation-based flexibility arrangements.

10. Empower individuals and teams – use the incentive system to raise performance and quality through empowered people who have the scope and skills needed to succeed and are rewarded accordingly. Reward processes should help to upgrade competence and encourage personal development.


12. Achieve integration – function as an integral part of the management processes of the organisation.

13. Provide value for money – assess the costs as well as the benefits or reward management practices and ensure that they are operated cost-effectively.

**Prerequisites of Introducing an Incentive Scheme**

Especially in developing countries, incentives will ensure improvement in productivity. But in certain cases the management is reluctant to give incentives to the labour force. The incentives may be in the form of financial or non-financial. The form and quantum of incentives will be different in different companies and with in the company it may vary between employees. The following are the important prerequisites for the introduction of an incentive scheme:
1. There should be enough work which necessitates extra effort to be put in by workers to produce more.

2. There should be enough demand for the product so that the extra products produced by the introduction of incentives schemes can be sold in the market.

3. Other methods of improvement should have been exhausted to a reasonable extent so that incentive payments accrue for a commensurate amount of effort put in by the workers. Accordingly, the production planning system, materials-handling, etc., should first be streamlined. Other reasons for delay should also be determined and removed.

4. Decision on the type of incentives should be taken. For any incentive to be effective, it must hold a value for the employee, either immediately or in the long run. It is therefore essential that when deciding upon the content of the benefits package, the actual or perceived needs of the employees together with their expectations are taken into account.

5. The incentive calculation, the maximum amount as incentive a worker can earn, etc. should be informed to the workers well in advance.

6. The content of the benefits package (incentives) should be identical for all the employees.

7. Another important factor to consider while introducing an incentive scheme is the past and present financial position of the organisation. In addition, it is necessary to evaluate the potential effect of the incentive scheme (i.e., growth or decline of business).
8. While fixing the incentives the workers should also be consulted for their expectations and opinions.

9. There should be provision for adequate supervision. Otherwise, for attaining incentives, the quality of the output may suffer. There is chance for material wastage, accidents etc.

**Elements of Incentive Scheme**

The incentive scheme will have five elements.⁸

1. **Cut-off Point**

   The cut-off point is the level of production at which the incentive will start accruing. If the production level or performance level is below this point, no incentive payment will be made. Depending on the type of organisation, the level of production will be expressed in terms of convenient units of output.

2. **Cut-off Payment**

   The cut-off payment is the amount that will be paid to the worker if the performance level reaches the cut-off point. The amount of incentive payment can be expressed in terms of the absolute monetary value or in terms of the percentage of wages. The incentive payment can vary for different levels of workers. Therefore, different values of incentive payments corresponding to various levels of workers will have to be indicated.

3. **Highest Performance Level**

   This is the anticipated highest level of performance.
4. **Potential Incentive Earning**

This is the earning at the highest performance level. Just as in the case of the cut-off payment, this earning can again be expressed for different levels of workers in terms of absolute monetary values or as a percentage of wages or salaries.

5. **Incentive Curve**

This is the curve which will show the incentive rates at various levels of performance between the cut-off point and the highest performance level. There is no hard-and-fast rule to obtain a particular type of curve. There can be as many types of curves as there are people who design the scheme.

**Types of Incentive Schemes**

Incentive Schemes could broadly be classified into Individual, Group and Plant-wide/Company-wide Incentive Schemes.

**Individual Incentive Schemes**

Individual incentive schemes are applicable to specific employee performance. It has two distinct sub-classifications: (a) Payment by Results (PBR) system, and (b) Measured Day Work (or Payment by Time) system.

**(a) Payment by Result (PBR) System**

In Payment by Result system the reward is based on the result (output). So this has a continuous relation between money and result; therefore, different results would get different wages. The figure 2.1 explains the PBR system clearly.
Although theoretically the Payment by Result system is based the payment on output, now a day the system has modified by paying a guaranteed minimum flat wage and an incentive on the basis of the output. The system will be clear from the Figure 2.2.

Figure 2.1
Payment by Result system

Figure 2.2
Payment by Result system
Acceptable Productivity Level (APL) – In the above case the incentive starts only after getting a particular output or productivity. So Acceptable Productivity Level is that level of output rate or productivity above which the incentive wage payment starts. APL is generally established jointly by management and labour (or management alone but with the implicit approval of the labour).

Motivated Productivity Level (MPL) – Motivated Productivity Level is the level of output that the management desires to raise the current productivity level to the practicable motivated productivity level with the expenditure of a certain amount of additional money. The aim of payments of monetary and non-monetary incentives is for achieving this motivated productivity level.

Incentive Expectancy – The difference in wages at Motivated Productivity Level and Acceptable Productivity Level is termed as Incentive Expectancy.

Advantages of Payment by Result System

1. The major advantage of this system is the increase in output.

2. There will be constant improvement in the production technology.

3. The income level of an efficient worker will improve. This will improve his morale.

4. With the expectation of higher rewards the worker efficiency may improve.

5. Workers are encouraged to paying more attention to reduce the lost time and make more effective use of their equipment, although the latter advantage may be offset to some extent by the increased wear and tear on such equipment.
Disadvantages of Payment by Result System

This system has so many disadvantages:

1. There is chance for deterioration in quality, increased materials usage, and improper handling of the machine etc.
2. The management should provide materials and well-maintained machines at all times.
3. The workers may resist deployment changes from one section to another.
4. The workers may even resist method change or technology change.
5. The management, in a way, loses control over the output of the employees.
6. Since the direct worker is on incentive but the indirect one such as the materials handler, stores workers, laboratory technician, office worker, maintenance mechanic, etc. is not on incentive pay, the management may find it difficult to integrate the work of the incentive and non-incentive employees. This leads to many imbalances in the working of the plant.
7. This system may also mean a fluctuating income for a worker since (a) the work may not be there all the time and (b) the worker himself may not be able to work at the same high pace all the time.

In order to avoid some of the disadvantages, it is advisable to follow some guidelines listed below:

a) Good relation between the management and workers - Before introducing the incentive system, steps should be taken to establish good relations and to obtain the consent of the workers concerned.
b) Protection of quality - The payment should be made only for the output that meets set quality standards.

c) Protection against wastage - The wastage of material and output may happen. In such cases, as the wastage increases the incentive pay should decrease.

d) Incentives to the indirect workers - In some industries, the indirect workers play a major role. So a part of the incentives should be given to them also.

e) Supervision - Qualified supervisors should be there to monitor the work.

f) Health and safety of the worker - The health and safety of the workers should always be protected by setting the task at a reasonable level, by guaranteeing an adequate minimum wage and through the enforcement of suitable safety regulations.

g) Record of earnings and production achievement - Employers should maintain adequate records of earnings and production achievement to enable the working of the system to be accurately assessed and also to enable the system to be modified where necessary in the interests of equity and efficiency.

h) Provision for hearing grievances - Adequate provision should be there to hear the grievances of workers arising from anomalies in earnings, working conditions and other matters affecting workers' welfare.

(b) Measured Day Work (or Payment by Time) system

Under this system, an employee opts to maintain an agreed target level of output in order to secure a stable higher wage rate. This system has two levels of wages—an agreed higher level of wages for a specified higher level of
consistent performance and the basic wage for lower levels of performance (Figure 2.3). Basically, this system is a Payment by Time System.

The employee's performance is monitored and if it falls below the target level for a period, he is given a warning. In spite of this, if the level of output during the next period also is below the target level, then the employee is downgraded to the basic wage rate.

**Figure 2.3**

**Measured Day Work System**

![Diagram](Wages in Rs.↑ Output →)

**Premium Pay Plan (PPP)** - Under this plan, for different specified levels of performance there are corresponding different levels of wage rates starting from basic to higher and higher premium pay rates (Figure 2.4). In fact this plan comes closer to the Payment by Result system.

**Figure 2.4**

**Premium Pay Plan**

![Diagram](Wages in Rs.↑ Output →)
Group Incentive Scheme

Measuring individual productivity may not be possible in all cases. In some cases a group effort may be required to perform a specific task. Especially in case of process industries, it is not possible to ascertain individual performances. In such situations, incentives are paid to the group as a whole. The amount is later divided among group members on an equitable basis (e.g. with consideration of the basic wage rate of the worker and the number of hours worked by him) agreed up on earlier.

One of the major drawbacks of group incentive system is that, in a group, some may be less efficient, still they may get the same share of incentive as that of an efficient worker. It will affect the morale of the efficient workers and ultimately it may cause the reduction of productivity.

In India we don’t have a system of evaluating individual performance from among a group performance. There should be a system for evaluating the individual performance. This can be done by the supervisors. They are having direct contact with the workers. They can evaluate the performance of the workers very well. But in this case there is chance for personal bias. So it is advisable to appoint some outside agencies for this purpose. An expert can evaluate the efficiency of the workers by watching the way of doing the work and also by a personal interview with the worker. An expert here means any one who is proficient in scientific management in work.
**Group size**

In group incentive scheme, the size of the group is important. We cannot fix a particular numerical group size for incentive scheme. An optimal group size is the one that considers the commonality of interest promotes co-operation and enhances the ultimate performance. The nature of the task involved, the inter-linkages, the production system in operation, the physical layout, etc. are some of the factors to be taken into consideration in forming a group.

**Advantages of Group Incentive System**

The major advantages of Group Incentive system are as follows:

(a) There may be better friendship and better sharing and linking-up of work resulting in overall increase in productivity.

(b) Supervision and time-keeping will be easy.

(c) Simplicity in incentive accounting.

(d) There will be better inter-checking of quality of product in a group working situation, and therefore quality of product performance may show improvement.

(e) The indirect workers also get due consideration in group incentive system.

**Disadvantages of Group Incentive System**

The major disadvantages of Group Incentive System are as follows:

(a) There may be a levelling effect, i.e., every one works at about average performance level of the group; an efficient worker and a not-so-good worker both may work at the same performance level.
(b) In a group some may be less efficient; even then they may get the same share of incentive as that of an efficient worker. It will affect the morale of the efficient workers and ultimately it will cause the reduction of productivity.

(c) If in a group the workers perform different tasks, then it will be difficult to distribute the group’s incentives according to the individual contributions.

(d) The group makes its own decisions about group output and therefore the management would have very little control over the output. It may lead to difficulties in planning of various production and related activities.

**Company-wide Bonus Schemes**

Now a days many companies like to retain the principles of motivation by financial incentives, but at the same time they like to keep away from the disadvantages of Payment by Result System or Group Incentive System. More importantly, the underlying thought is that the ultimate objective is to enhance the overall productivity of the plant or company. This requires the integration and co-operation of all the departments/sections of the company. This integration and cooperation can be achieved through the use of financial incentives. A suitable measure of productivity will be established, by agreement between the management and the workers, and the labour-cost savings will be distributed amongst all the workers of the company.

The success of this system is dependent on how much the workers feel as part of the company and the extra efforts and the novel suggestions made by them to increase the overall productivity of the company. In this system the laborers’ get participation in the management of the company. ⁹
Financial and Non-financial Incentives

Financial Incentives

The financial incentives are of two types –

1) Direct financial incentives and

2) Indirect financial incentives.

Direct financial incentives reward the employee or group of employees through increased payment which is related in a certain way to each man’s contribution to the production effort.

The indirect financial incentives include pension benefits, subsidised meals, medical and leave facilities. These all are financial incentives, but only indirectly so. They do not mean an additional amount in the employee’s pay packet nor are they necessarily related to his performance.

Financial rewards need to be considered from three points of view:

1. the effectiveness of money as a motivator:

2. the reasons why people are satisfied or dissatisfied with their rewards:

and

3. the criteria which should be used when developing a financial reward system.¹⁰

1. Money and Motivation

The motivation theories say that people want to satisfy their needs. In order to satisfy the needs money is required. However, the effectiveness of money as a motivator is dependent on the need satisfying power of money in
respect to the individual. It means that, the degree of effectiveness of money as a motivator will be different with different individuals.

The effectiveness of money as a motivator can be analysed with the help of certain theories, such as: the ‘economic man’ approach, Herzberg’s two factor model, instrumental theory, equity theory and expectancy theory.

The ‘economic man’ approach

This approach is based on the reinforcement theory. According to this view, people are primarily motivated by economic rewards. It assumes that they will be motivated to work if rewards and penalties are tied directly to the results they achieve.

Herzberg’s two factor model

Herzberg pointed out that money is a ‘hygiene factor’ which serves as a potential dissatisfier if not present in appropriate amounts, but not as a potential satisfier or positive motivator. A further reason given by Herzberg for regarding salary as a ‘hygiene factor’, that is, a factor which prevents disease rather promotes health, was because its impact on favourable feeling was largely short term, while its impact on unfavourable feelings was long term extending over periods of several months.

But, as Opsahl and Dunnette point out, Herzberg’s argument that money acts as a potential dissatisfier is mystifying. In all of the definitions of unusually good job feelings, salary was mentioned as a major reason for the feelings 19 percent of the time. Of the unusually good feelings that lasted several months, salary was reported as a casual factor 22 percent of the time; of
the short-term feelings, it was a factor 5 percent of the time. In contrast, salary was named as a major cause of unusually bad job feelings lasting several months, it was mentioned only 18 percent of the time (in contrast with the 22 percent of long-term good feelings mentioned above).

They conclude that, these data seem inconsistent with the interpretations and lend no substantial support to hypotheses of a so-called differential role for money in leading to job satisfaction or job dissatisfaction.

Herzberg's two factor model does not therefore provide a reliable basis for developing pay policies.

**Instrumental Theory**

This theory states that money provides the means to achieve ends. It is an instrument for gaining desired outcomes and its force will depend on two factors: first, the strength of the need and, second, the degree to which people are confident that their behaviour will earn the money they want to satisfy the need.

The instrumental role of money has been stressed by Gellerman\(^{12}\), who suggested that money in itself has no intrinsic meaning and acquires significant motivating power only when it comes to symbolize intangible goals. Money acts as a symbol in different times- a man's reaction to money 'summarizes his biography to date, his early economic environment, his competence training, the various non-financial motives he has acquired, and his current financial status'.

Money is therefore regarded as a powerful force because it is linked directly or indirectly to the satisfaction of all the basic needs. But the
effectiveness of money as a motivator depends on a number of circumstances, including the values and needs of individuals and their preferences for different types of financial or non-financial rewards etc.

**Equity theory**

Equity theory, as developed by Adams, argues that satisfaction with pay is related to perceptions about the ratio between what one receives from the job (outcomes in the form of pay) to what one puts into it (inputs in the form of effort and skill) compared with the ratios obtained by others.

Equity theory is related to Discrepancy theory which, as stated by Lawler, indicates that satisfaction with pay depends on the difference between the pay people receive and what they feel out to receive. Equity theory, however, emphasises that these feelings are based on comparisons.

**Expectancy theory**

Expectancy theory states that motivation will be strong if individuals can reasonably expect that their efforts and contributions will produce worthwhile rewards.

This theory was developed by Porter and Lawler into an expectancy model which suggests that there are two factors determining the effort people put into their jobs:

1. The values of the rewards to individuals in so far as they satisfy their needs for security, social esteem, autonomy, and self-actualization.
2. The probability that rewards depend on effort, as perceived by the individual— in other words, his or her expectations about the relationships between effort and reward.

Money is important to people because it is the medium for satisfying the needs. It is significant not only because of what they can buy with it but also as a highly tangible method of recognising their worth, thus improving their self-esteem and gaining the esteem of others. Pay is the key factor for attracting people to join an organisation, although career opportunities, job interest and the reputation of the organisation will also be factors. Employ retention also, pay is regarded as a key factor.

Pay can motivate, as a tangible means of recognising achievement. It can reinforce desirable behaviour. But for lasting motivation, attention has also to be paid to the non-financial motivators.

2. Reasons why people are satisfied or dissatisfied with pay

It is very difficult to generalize about the causes of satisfaction or dissatisfaction with reward. It depends largely on the values and needs of individuals and on their employment conditions. Research by Porter and Lawler and others has also shown that higher paid employees are likely to be more satisfied with their rewards but the satisfaction resulting from a large pay increase may be short-lived. People tend to want more.

Other factors which may affect satisfaction or dissatisfaction with pay include the degree to which:

• individuals feel their rate of pay or increase has been determined fairly;
• rewards are commensurate with the perceptions of individuals about their ability, contribution and value to the organisation (but this perception is likely to be founded on information or beliefs about what other people, inside and outside the organisation, are paid); and

• individuals are satisfied with other aspects of their employment – for example their status, promotion prospects, opportunity to use and develop skills and relationships with their managers.

3. Financial Rewards Criteria

The criteria for assessing the effectiveness of financial reward practices as means of motivation are that:

1. they are, as far as possible, internally equitable as well as externally competitive (although there will always be a tension between these two criteria - paying market rates may upset internal relativities);

2. pay-for-performance systems are created in the light of an understanding that direct motivation only takes place if the rewards are worthwhile, if they are specifically related to fair, objective and appropriate performance measures, if employees understand what they have to achieve, and if their expectations on the likelihood of receiving the reward are high;

3. employees understand how the financial reward system operates, how they benefit from it, and how the organisation will help them to develop the skills and competences they need to receive the maximum benefit.
Non-financial Incentives

Non-financial incentives are generally introduced as a normal practice in good management. Provision of good working conditions, achievement, encouragement and appreciation of good work (recognition), responsibility, personal growth, liberal management outlook and a general atmosphere of friendship and co-operation in dealing with common problems could be cited as some examples of non-financial incentives.

Good working conditions

Pleasant and healthy working environment is certainly an incentive for the workers. This study found that the productivity of employees, who are satisfied with the working conditions, is high.

Achievement

Research carried out by McClelland of the needs of managerial staff resulted in the identification of three major needs, those for achievement, power and affiliation. The need for achievement is defined as the need for competitive success measured against a personal standard of excellence.

This can be increased by the organisation through the processes of job design, performance management and skill or competence based pay schemes.

Recognition

Recognition is one of the most powerful motivators. People need to know not only how well they have achieved their objectives or carried out their work but also that their achievements are appreciated. The recognition should be related to real achievements.
Awarding of financial rewards and also other forms of tangible items can be recognition for the employees. There are other forms of recognition such as long service awards, status symbols of one kind or another, sabbaticals and work-related trips abroad, all of which can be part of the total reward process.

**Responsibility**

People can be motivated by being given more responsibility for their own work. It is also related to the fundamental concept that individuals are motivated when they are provided with the means to achieve their goals.

Providing motivation through increased responsibility is a matter of job design and the use of performance management processes. The philosophy behind motivating through responsibility was expressed as follows in McGregor’s theory Y: ‘The average human being learns, under proper conditions, not only to accept but also to seek responsibility.’

**Liberal managerial outlook**

The management should be liberal to the workers. There should be a liberal outlook on all aspects of the work especially in the payment of rewards. It will be a motivating factor.

**Friendship and co-operation**

There should be a friendly atmosphere in the work place. The management should be careful to solve the problems of the workers. Participation in decision making, consulting the workers for their opinions etc., will foster co-operation in the work place.
Personal Growth

In Maslow's need hierarchy, self-fulfilment or self-actualization is the highest need of all and is therefore the ultimate motivator. The organisation should provide the facilities for the growth and development of its employees.

People want to continually upgrade their skills and progressively develop their skills. The availability of learning opportunities, the selection of individuals for high prestige training courses and programmes and the emphasis placed by the organisation on the acquisition of new skills as well as the enhancement of existing ones, can all act as powerful motivators.

The importance of non-financial incentives is not be underestimated because they touch the inner chords of the employees' conscience and could bring out responses greater than sizeable financial incentives thoughtlessly offered.

Financial and non-financial incentives play an important role in motivating the workers. Non-financial incentives focus on the needs of people for recognition, personal growth, achievement and responsibility, and therefore contribute to increase in motivation, commitment and improved performance. They can make a deeper and long lasting impact on motivation and commitment than transitory financial incentives. It does not mean that the importance of financial incentives is less. While implementing the reward strategies, along with the financial incentives, the management should provide due care in providing non-financial incentives also.
Factors Influence Incentive Scheme

In order to recruit and retain a workforce of the correct calibre, it is essential that the organisation should establish and maintain payment levels which are at least comparable to that of competing employers. It is therefore imperative that any remuneration system takes account of current market forces and potential trends in payment levels. It is important for employers to get a satisfactory return on such expenditure in terms of employee performance, commitment and loyalty. In order to motivate employees to behave in such a manner, it is essential that the incentives offered are considered to be of significant value by the employee, and an appropriate reward for their effort.

While fixing the incentive scheme for employees, employers must take account of the following factors:

1. The external labour market

While fixing the incentive schemes, the employer should examine the external labour market in order to see what competing employers are paying to recruit and retain employees with similar skills, abilities, qualifications and experience.

2. Internal differentials

Within most organisations, the workforce tends to be arranged into a number of categories or grades of employee. There should not be much difference in the payments of incentives to the same class of employees. The difference in payment may occur, but it should be based on the labour productivity. That means the incentives should be based on labour productivity.
3. Individual skills and performance

In some cases the organisation may be forced to appoint employees with a pay above the market rates. Some work may require employees with special skills and abilities. In such cases, the organisation may be willing to pay above the market rates in order to ensure the speedy appointment of an appropriately skilled individual.

The organisation may also deviate from market rates when the incentive system incorporates a performance based element of pay. In such circumstances, if an employee’s performance reach or go beyond a predetermined standard, they become eligible for an incentive.

4. Collective bargaining

The demands made upon employers by employee representatives such as trade unions are an important influencing factor on incentive policy. Within most organisations, it is very rare for employees to negotiate their individual terms and conditions of employment; this procedure normally takes place on a united basis via collective bargaining. Collective bargaining is a process of joint negotiation between the employer and the employee representative, or trade unions, regarding all aspects of the employment relationship. Perhaps the most common item on the collective bargaining agenda is the issue of pay and the terms and conditions of employment. The pressure applied by a united workforce is likely to have an impact on the remuneration policy and must be considered when establishing an incentive scheme.
5. **Company performance**

In every organisation there should be a justification for the increase in payment levels. That means, in order to provide payment increases, the organisation must have adequate resources to cover the additional expenditure. If the organisation does not have sufficient funds to pay for increased remuneration levels, then to agree to such changes is likely to result in the failure of the business. If the workforce demands an increase in pay, they must be able to justify this increase with a corresponding increase in productivity levels.

In short, the increase in pay should be in correspondence with the increase in productivity.

6. **Government interventions**

Occasionally, payment levels within organisations can be affected by Government intervention, either in an attempt to control salary inflation or to guarantee minimum wages. In some cases there may be a particular limit for the increase in pay. So, while fixing the incentive scheme, care should be taken to consider the Government norms.

Now, it is very clear that the factors explained above are very crucial and so careful consideration must be given to such factors when establishing or reviewing an incentive scheme. The success or failure of any incentive scheme is largely dependent on adequate account being given to the significance of internal and external influences.
Components of Remuneration

From the above discussion, the components of remuneration can be classified as follows: (Fig.2.5)

**Figure 2.5**

Components of Remuneration

<table>
<thead>
<tr>
<th><strong>FINANCIAL</strong></th>
<th><strong>NONFINANCIAL</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Hourly and Monthly Wages</em></td>
<td><em>Perquisites</em></td>
</tr>
<tr>
<td><em>Salaries</em></td>
<td><em>Company Car</em></td>
</tr>
<tr>
<td><em>Incentives</em></td>
<td><em>Paid holidays</em></td>
</tr>
<tr>
<td><em>Individual Group</em></td>
<td><em>Club</em></td>
</tr>
<tr>
<td><em>Fringe Benefits</em></td>
<td><em>membership</em></td>
</tr>
<tr>
<td><em>P.F.</em></td>
<td><em>Furnished house</em></td>
</tr>
<tr>
<td><em>Gratuity, Health and Group insurance,</em></td>
<td><em>News paper allowance</em></td>
</tr>
<tr>
<td><em>Medical benefits,</em></td>
<td><em>Telephone reimbursement</em></td>
</tr>
<tr>
<td><em>Education allowance etc.</em></td>
<td><em>Stock option schemes, etc.</em></td>
</tr>
</tbody>
</table>

**Job Context**

- Achievements, Good working conditions,
- Challenging job
- Responsibilities
- Recognition
- Friendship & co-operation
- Personal growth, etc.
Productivity

Meaning and definitions of Productivity

The term ‘Productivity’ was probably first mentioned by the French Mathematician Quesnay in an article in 1766. In 1883, another Frenchman, Littre, defined productivity as the “faculty to produce”. In 1950, the Organization for European Economic Cooperation (OEEC), one of the oldest organizations espousing productivity enhancement, particularly in the Europe, issued a formal definition: “Productivity is the quotient obtained by dividing output by one of the factors of production. In this way it is possible to speak of the productivity of capital, investment, or raw materials, according to whether output is being considered in relation to capital, investment or raw materials, etc.”

Dr. John Kendrick and Daniel Creamer, in their classic work offered definitions of productivity from an economist’s viewpoint. In the late 1970s and early 1980s, the then American Productivity Centre (APC) popularized its definition: Profitability = Productivity x Price Recovery (Table 2.1).
Table 2.1

History of Productivity Definitions

<table>
<thead>
<tr>
<th>Productivity Definitions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Quesnay</td>
<td>1766</td>
</tr>
<tr>
<td>Littre</td>
<td>1883</td>
</tr>
<tr>
<td>OEEC</td>
<td>1950</td>
</tr>
<tr>
<td>Davis</td>
<td>1955</td>
</tr>
<tr>
<td>Kendrick and Creamer</td>
<td>1965</td>
</tr>
<tr>
<td>Siegel</td>
<td>1976</td>
</tr>
<tr>
<td>Sumanth</td>
<td>1979</td>
</tr>
<tr>
<td>APC</td>
<td>1979</td>
</tr>
<tr>
<td>Sumanth</td>
<td>1987</td>
</tr>
</tbody>
</table>

Source: David J Sumanth, Total Productivity Management. A Systemic and Quantitative Approach to Compete in Quality, Price & Time, St. Lucies Press, Boca Raton, Florida, p.4

The European Productivity Agency are of the view that, "Productivity is an attitude of mind. It is mentality of progress of the constant improvement of that which exists. It is the certainty of being to do better today than yesterday.
and continuously. It is constant adoption of economic and social life to changed conditions; it is the continued effort to apply new technique and new method. It is the faith in human progress”.

In order to achieve higher economic growth it is essential to increase the output consistently with less than proportionate increase in the cost of production. In other words mere increase in production does not mean increased productivity. Increase in production must be accompanied by reduction in the cost of every additional unit. In short the increase in production must be economical. This means securing higher productivity. Thus productivity means highest possible production with lowest production and social cost.

Cambridge International Dictionary of English states that “A company’s or county’s productivity is the rate at which it makes goods and is usually judged in connection with the number of people and amount of materials necessary to produce the goods”.

According to Desai and Rao, “productivity in formal sense stands for the ratio between the output of goods and services and the input that has been employed for the same”.

Dr. S. Nataraja Iyer and Dr S. Kevin defined Productivity as “a relationship of real (ie,physical) output to real input”.

In the words of Michael John, Productivity, broadly speaking is the pace of production; it is the capacity of the manpower engaged in an industry to get
the best out of it in the matter of production through technological and other aids within a given set-up of men, machines, materials and money. \(^{22}\)

The European Economic Community defines productivity as 'the ratio between the production of a given commodity measured by volume and one or more of the corresponding input factors, also measured by volume.' \(^{23}\)

**Measurement of Productivity**

In simple sense Productivity is an output-input relationship, that is, the quantity of output that can be produced from a certain quantity of inputs used. Some authors defined Productivity as efficiency (doing things right) plus effectiveness (doing the right things).

Thus, the productivity can be conveniently expressed as:

\[
\text{Productivity} = \frac{\text{Output}}{\text{Input}} = \text{Efficiency} + \text{Effectiveness}
\]

In the words of U.K. Menon, Productivity means "the ratio between the volume of output as measured by production indices and the corresponding volume of labour input as measured by employment indices." \(^{24}\)
David J. Sumanth, an eminent author in Productivity introduced four basic types of Productivity Measures (Table 2.2)

Table 2.2

Basic Types of Productivity Measures

- Partial Productivity (PP)
- Total Factor Productivity (TFP)
- Total Productivity (TP)
- Comprehensive Total Productivity (CTP)


*Partial Productivity* is the ratio of output to one class of input. For example, output per man-hour (a labour productivity measure) is a partial productivity concept. So then output per ton of material (a material productivity ratio) and interest revenue generated per rupee of capital (a capital productivity ratio) and so on.

*Total Factor Productivity* is the ratio of net output to the sum of associated labour and capital (factor) inputs. The net output here is sometimes called *value-added output*. In this ratio, we explicitly consider only the labour and capital input factors in the denominator.
*Total Productivity* is the ratio of *total* output to the sum of all input factors. This is a holistic measure which takes into consideration the joint and simultaneous impact of all the input resources on the output, such as manpower, materials, machines, capital, energy, etc. Another term used in recent years is multifactor productivity, which considers more than one input factor in the denominator of the productivity ratio, but is not necessarily a total factor or total productivity measure.

*Comprehensive Total Productivity* index is the total productivity index multiplied by the intangible factor index. This is the most sophisticated measure that extends the total productivity measure to include any user-defined qualitative factors— as many as are relevant to a company—ranging from product quality and process quality to timelines, market share, community attitude, etc.

**Elements influencing Productivity**

Now a day, with the increasing impact of Globalization and Nationalization, the significance of higher productivity has increased. In order to survive in this competitive world higher productivity is inevitable. As mentioned earlier, higher production does not mean higher productivity. The term higher productivity implies that obtaining as much output as possible from a given units of input. For attaining the above, a better understanding of the elements which affect productivity is very important.

There are three important elements that influence productivity; they are capital, technology and people. An efficient utilization of these three elements
will ensure higher productivity. Now probably doubts may arise that among these three which is the most important. Some of the authors have the opinion that man is intelligent and creative and without his help nothing is possible. The experiences also reveal the importance of human factor.

Mr. OM Prakash Brahmachary opined that 'the failure to recognise and motivate human resources has been the main cause of India’s failure to achieve higher level of productivity'. Even though we recognise the importance of the humane factor, we can’t neglect the relative importance of the other two factors also.

Labour Productivity

From the above, it is clear that the Labour Productivity is a partial productivity ratio. Though in the productivity context many other elements such as materials, machines, capital, technology etc. exist, most of the researchers recognise the relative importance of the human factor (i.e., Labour Productivity). This study also is based on the same concept.

According to Professor Alfred Marshal, “man is both the end and an agent of production”. This quoting is sufficient to answer the question which is raised by some of the researchers that among the different factors of production such as men, machines, materials, land and buildings, which has greater significance in the overall productivity drive. A developing country like ours, where capital is scarce, utmost attention has to be given to ensure the best possible use of materials, plant and equipment. Even though materials and
machines are also important factors of production, their maximum utilisation is dependent on the skill and willingness of the operators. Here comes the importance of the labour productivity.

The term productivity has been defined and interpreted in different angles by various experts. In the study of incentives, the relevant concept is that of labour productivity, that is, that part of productivity which can be attributed to the incremental labour effort. The definition of labour productivity in practical situations is not very different from industrial productivity or output-input ratio. In most of the earlier studies, the output per worker or the Gross Value Added was considered as the measures of labour productivity.

Mr. Ashok K Aggarwal and D Durga Prasad in their study mentioned another measure, which takes into account the contribution of labour per rupee of wages paid, i.e., if labour is paid one rupee of wages, how much output does it produce. Several studies have pointed out that, especially when output depends on machine productivity, output per worker may vary due to factors beyond the control of the worker. Moreover it will be difficult to measure the productivity of an industrial worker who is not directly involved in the production of final output but aid the production in various stages and it is also not possible to measure the productivity of a worker exactly where the production is a collective action.

In order to overcome these drawbacks the present day industrial psychologists advocate the adoption of multi-dimensional criterion based on
objective and subjective measures. For this purpose a person's job behaviour in terms of personal data like the number of times he is late, quality of output, accidents, absences, interest in work, obedience, co-operativeness, initiative, sincerity, job knowledge, dependability, decision making capacity etc. will be taken into consideration. This measure is very useful especially when men and machines are inseparable in production process. People like Seashone, Indik, George Poulous (1960) Naylor (1968), Keddy (1980) pointed out that a multiple criterion is more appropriate than one-dimensional criterion for measuring productivity of workers.

In this study also in order to study the relation between productivity and socio-economic background of industrial workers the same criterion is used for measuring labour productivity.

**Measurement of Labour Productivity**

Simply, Labour Productivity is the ratio of output of goods and services produced to the amount of labour used.

\[
\text{Labour Productivity} = \frac{\text{Output}}{\text{Input}}
\]

The labour can be measured either by number of workers or worker-hours employed in generating the output.
Labour Productivity = \frac{Output}{\text{Number of workers}}

or

Labour Productivity = \frac{Output}{\text{No. of workers x Hrs. employed}}

Another measure which takes into account the contribution of labour per rupee of wages paid, i.e., if labour is paid one rupee of wages, how much output does it produce.

Labour Productivity = \frac{Output}{\text{Wages}}

**Gross Value Added Approach**

This is another measure of labour productivity. It is the ratio of Gross value added to the total number of employees. It measures the value addition by employee of a firm.

Labour Productivity = \frac{\text{Gross value added}}{\text{No. of employees}}

The measurement of labour productivity in a conventional type of bonus system will be different. The ‘standard performance’ will be determined by work measurement of some kind and is used to calculate a ‘standard output’. The conventional formula is:\(^{26}\)

Labour Productivity = \frac{\text{Units of work produced}}{\text{Standard units of work expected}} \times 100
Labour Productivity = \frac{\text{Standard hours earned}}{\text{Hours taken or clocked}} \times 100

The following table shows some of the labour productivity measures and their sensitivity.

**Table 2.3**

**Labour Productivity Measures**

<table>
<thead>
<tr>
<th>Labour Productivity Measure</th>
<th>Sensitive to</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Work content of production</td>
<td>Definition of ‘work Content’</td>
</tr>
<tr>
<td>Time worked by labour</td>
<td></td>
</tr>
<tr>
<td>2. Physical production</td>
<td>Changes in product-mix</td>
</tr>
<tr>
<td>Time worked by labour</td>
<td></td>
</tr>
<tr>
<td>3. Physical production</td>
<td>Changes in product-mix &amp;</td>
</tr>
<tr>
<td>Cost of labour</td>
<td>Wage rates</td>
</tr>
<tr>
<td>4. Added value</td>
<td>Change in product-mix,</td>
</tr>
<tr>
<td>Cost of labour</td>
<td>finished goods inventory,</td>
</tr>
<tr>
<td></td>
<td>sales prices and wage rates.</td>
</tr>
</tbody>
</table>

To sum up, in order to improve the labour productivity, people should be motivated. The expectations of individuals will differ on the basis of their needs. If the organisation is unable to satisfy the needs of the workers, dissatisfaction will arise and it will affect the labour productivity unfavourably. So the organisation should recognise the needs of the workers and maximum care should be taken to satisfy their needs.

One of the important tools applied for the improvement of labour productivity is to provide financial and non-financial incentives to the workers. Especially in developing countries, money is regarded as an effective tool in motivating people. But the financial incentives as a motivating factor has effect only for a short period, but non-financial incentives will last long. The reason for short-term effect in financial incentive is that as soon as a lower order need satisfies people wants to satisfy the next higher order need. So they expect more money. Hence, the organisation should provide both financial and non-financial incentives to the employees. It should also be remembered that the incentives should be based on the productivity.
Foot Notes


21 Dr. S. Nataraja Iyer and Dr S. Kevin 'Profitability and Productivity of Public Sector Enterprises in Kerala', Management Researcher, Vol.IV, No.1&2 July-Dec.-1997. p.43

24 U.K. Menon, Higher Productivity in India, Indian Labour Gazette, August 1956, p.84