MANAGEMENT OF LABOUR COST (WITH SPECIAL REFERENCE TO METHODS OF REMUNERATION): A STUDY

Suresh Kumar Rajora[*]

Abstract

Like material cost, labour also forms a significant part of cost of production. Therefore, it is essential that there should be proper and effective control over labour cost. Labour cost control will, in effect, lead to minimization of cost of labour per unit of output. This is more so when labour cost is of fixed nature. In India, a major part of labour cost is fixed and not variable[1]. Accordingly, an increase in output, other things remaining constant, for a given amount of labour cost will not only result in lower unit cost of labour but that of overhead. This will also result in lower average cost. Conversely, output remaining constant, any reduction in the amount of total labour cost will also result in lower cost per unit. In this paper Management of Labour Cost is discussed with special reference to methods of remuneration.

Keywords: *Labour Cost, Overhead, Average Cost, Methods of Remuneration.*

Introduction

It may be pointed out, in this connection, that labour is not a commodity and it does not behave like a commodity. From this angle, the task of exercising control over labour cost is even more difficult than that of material cost or other expenses. Then, human element in labour cost control should be given due consideration in order to make any control programme effective[2]. In other words, the human element involved in production should be clearly distinguished in its utilization from other resources of production.

A large number of non-financial factors affect the efficiency of labour and they should not be lost sight of in a study of labour cost control. For instance, the general cleanliness of the working area, lighting, ventilation, colour, temperature control, measures for the safety devices, impact of noise, working space, etc. will have an effect on the labour efficiency[3]. Therefore, labour cost control .scheme will be of little practical use if an attempt is not made to evaluate the effects of all non-financial factors vis-a-vis the financial factors.

Methods of Remuneration

The various methods of remuneration may be broken down into the following main heads:

- Time Rates
- Piece Rates
- Combination of Time and Piece Rates
- Premium Bonus Schemes
- Group Bonuses
- Others

Time Rate Systems

The general characteristic of all the time rate systems is that the workers do not get anything beyond their time wages, i.e., Time x Rate. It is the employer who may gain arising out of extra efficiency of his workers or lose due to their inefficiency. The time rate system can be discussed in the following term.

Ñ   **Time Rate at Ordinary Levels:** Under this method, payment is made on the basis of time which may be hour, day, week or a month. The rate of pay should not be less than that prescribed by a tribunal, wage board award or by the Government through Payment of Minimum Wages Act[1]. When payment is made on the basis of hours worked by the employees, wages are to be calculated as follows:

Wages = Hours worked X Rate per hour

For overtime work, an extra premium will usually be paid.

Ñ   **Time Rate at High Wage Levels:** This system is similar to the previous one except that the day rates are made high enough, so that in return a much higher standard of performance from the workers is ensured. Henry Ford was of the opinion that time rates at high wage levels are equally effective like other incentive plans. The features of a high-wages plan may be summarized below:

- The hourly rate is higher than normal wage for the industry.
- Standards of performance are set and there is stricter supervision to ensure the attainment of the standards. The standards set should be capable of being accomplished by an efficient worker[2].
- Overtime work is not permitted.

Ñ   **Graduated Time Rates:** Under this method, wages are paid at time rates which vary with changes in local cost of living index. In India, the basic wage rates normally remain fixed and it is the dearness allowance that varies with the cost of living. Sometimes, wage rates are adjusted with changes in the selling price of the product.

Application of Time Rate Systems

There are many circumstances in which time rate systems are suitable. They are:

Ñ   Where the work demands a high degree of skill and quantity of production is less important, e.g., tool-making, machine manufacturing, watch-making, etc.

Ñ   Where it is difficult to measure the work done by workers. This is applicable in case of indirect workers such as supervisors, cleaners and sweepers, night watchmen, etc.

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[1]   R.D. Kennedy and S.Y. McMullen, op.cit.p.247
[2]   R.M. Shrivastva, Fiancial Decision Making,p.47

Ñ   Where machine performs the job and the workers have no control over the work, e.g., in process industries the flow of work is regulated by the speed of the conveyor belt.

Ñ   Where work is not repetitive, e.g., in jobbing type industries.

Ñ   Where work is of such-a nature that efficiency can be ensured by close supervision.

Ñ   Where worker does a work in his own interest, e.g., construction of accommodation[1].

Piece Rate Systems or Payments by Results

Systems based on work are otherwise known as piece rate systems. According to these systems, the extent or volume of work did forms the basis for determination of the wages payable to the workers. It is paid at a certain rate per unit produced or job performed or operation completed irrespective of the duration of time taken by the workers. Generally, workers stand to gain or lose as a result of a standard efficiency which they attain. The slogan may be "produce more and earn more[2]".

Ñ   **Straight Piece Rate:** Under this method, payment is made on the basis of a fixed amount per unit or per fixed number of units produced without regard to time taken[3]. Thus,

Earnings =   Number of units   X   Rate per unit

The fixation of piece rate generally depends upon:

▪ comparable time rate for the same class of workers, and

▪ Expected output in a given time.

The piece rate is usually fixed with the help of work study. Standard time for each job is ascertained first. Piece rate is then ascertained with reference to hourly or daily rate of pay.

Ñ   **Piece Rates with Graduated Time Rates**: Under this system, workers are paid minimum wages on the basis of time rates. A piece rate system with graduated time rate may include any one of the following:

▪ If earning on the basis of piece rate is less than the guaranteed minimum wages, the workers will be paid on the basis of time rate. On the other hand, if earning according to piece rate is more, the workers will get more.

▪ Guaranteed wages according to time rate plus a piece rate payment for units above a required minimum.

▪ Piece rate with a fixed dearness allowance or cost of living bonus[4].

Ñ   **Differential Piece Rates:** Under this system, there is more than one piece rate to reward efficient workers and to encourage the less efficient workers or a trainee to improve. In other words, earnings vary at different stages in the range of output. This scheme was first introduced in the U.S.A. by F.W. Taylor, the father of scientific management, and was subsequently modified by Merrick[5].

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[1]   Ibid., p.5.

[2]   Thomas F.kaller, Interpretation Ass. Of Accountants, Management Accounting, Feb. 2011, p.20.

[3]   C.L. Moore and R.K. J.aedicke, op.cit., p. 406

[4]   Norman Thornton, Management Accounting, (Allied publishers. Bombay, 2012), p. 259

[5]   Op.cit., p. 703.

▪ **Taylor Differential Piece Rate System:** In the original Taylor differential system, piece rates were determined by time and motion study. Day wages were not guaranteed. There were two rates: below the standard, a very low piece rate and above the standard, a high piece rate was fixed. Thus, the system was designed to:

o discourage below-average workers by providing no guaranteed wages and setting low piece rate for low level production, and

o reward the efficient workers by setting a high piece rate for high level production.

The Taylor differential system is often criticized as "unfair" due to the fact that minimum wages of the worker are not guaranteed. However, Taylor's system is suitable to those industries where products including the processes and operations can be standardized[1].

▪ **Multiple Piece Rates or Merrick Differential System:** Merrick afterwards modified the Taylor's Differential Piece Rate. Under this plan, the punitive lower rate is not imposed for performance below standard. On the other hand, performance above a certain level is rewarded by more than one higher differential rates. The rates which are applied are:

Efficiency	Piece-rate Applicable
Up to $83\frac{1}{3}$ %	Normal rate
Above $83\frac{1}{3}$% but up to 100%	10% above normal rate
Above 100%	30% above normal rate.

Thus, this plan rewards the efficient workers and encourages the less efficient workers to increase their output by not penalising them for performance below $83\frac{1}{3}$%. This method also does not guarantee day wages[2].

Combination of Time and Piece Rates

Ñ **Emerson's Efficiency Plan:** The main features of the plan are:

▪ Day wages are guaranteed.

▪ A standard time is set for each job or operation, or a volume of output is taken as standard.

▪ Below $66\frac{2}{3}$% efficiency, the worker is paid his hourly rate.

▪ From $66\frac{2}{3}$% up to 100% efficiency, payments are made on the basis of step bonus rates.

▪ Above 100% efficiency, an additional bonus of 1% of the hourly rate is paid for each 1% increase in efficiency[3].

Efficiency for this purpose is calculated as follows:

On Time Basis

$$\text{Percentage Efficiency} = \frac{\text{Standard time allowed}}{\text{Time taken}} \times 100$$

1 　　　Op.cit., p. 444.
2 　　　Ibid, p. 444.
3 　　　Ibid, pp. 446-449.

On Production Basis

$$\text{Percentage Efficiency} = \frac{\text{Actual production}}{\text{Standard Production}} \text{ X } 100$$

Emerson's Efficiency Plan is suitable to:

- encourage slow workers to better their performance;
- Facilitate an easy transfer from time wages to payment by results scheme.

But this scheme is not meant for skilled and competent workers[1].

Ñ   **Gantt Task and Bonus Scheme:** This system combines time rates, high piece rates and bonus. Its main features are:

- Day wages are guaranteed.
- Standards are set and bonus is paid if a work is completed within the standard time allowed.
- Performance below standard is paid on the basis of time rates (guaranteed).
- Performance above standard (i.e., when time taken is less than standard time allowed) is paid at high piece rate. The foreman may also receive bonus if the workers under him qualify for it[2].

The time and bonus rates are fixed for each job, and when a job is completed the worker goes on with the next. The pay thus earned consists of (i) day wages plus (ii) the sum of all bonuses (i.e., quantity X high piece rate)[3]. Thus, this plan provides an incentive for efficient worker to reach a high level of performance and also protects and encourages the less efficient workers by ensuring the payment of their minimum wages in case their performance is below the standard level. The Gantt Task scheme may be introduced in:

- Heavy engineering and structural workshop.
- Machine tool manufacturing industry.
- Contract costing where work is to be completed within a specified date.

Ñ   **Bedaux Scheme or 'Points' Scheme:** This system requires a very accurate time study and work study. Under this scheme, each minute of standard time is called the *Bedaux point* or "B". Thus, each operation to be performed can be expressed as being so many "Bs" and payment is made on the, basis of the number of "Bs" standing to the credit of a worker[4].   Time wages are paid until 100% efficiency rate is reached. Under the original plan, the worker received only 75% of the bonus while the 25% was received by supervisors. But, according to modified scheme, the workers nowadays receive 100% of the bonus. The advantages of the scheme are:

Ñ   A competitive element is introduced and this acts as an additional spur to production.

Ñ   It is a means of strong managerial control and accordingly receives managerial support.

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[1]   J.L. Brown and L.R. Howard, op. cit., p. 287
[2]   Ibid., p. 151.
[3]   Fremgen, op. cit., p. 153.
[4]   Ibid, p. 86.

The limitations of the scheme are: high cost due to additional clerical work and inspection, lack of attempt to control material costs, etc.

Premium Bonus Schemes

The various schemes under this method combine time wages with piece rates. As a result, the gains on labour efficiency and losses on inefficiency are shared by employer and employee[1]. There are three main schemes under this heading, viz.

Ñ   **The Halsey Scheme:** The main features of this scheme are:

- Standard time is fixed for each job or operation.
- Time rate is guaranteed and the worker receives the guaranteed wages irrespective of whether he or she completes the work within the time allowed or takes more time to do it.
- If the job is completed in less than standard time, a worker is paid a bonus of 50% of the time saved at time rate in addition to his normal time wages[2].

Thus, Earnings under this scheme will be:

Guaranteed wages + Bonus (50% of time saved), if any

= (Hours worked x Hourly Rate) + ½ (Time allowed - Time taken) X Hourly Rate

Group Bonus Schemes

In all the schemes discussed so far, the bonus payable has been ascertained on an individual basis. But bonus scheme for a group of workers working together may also be introduced where:

Ñ   it is necessary to create a collective interest in the work;

Ñ   it is difficult to measure the output of individual workers;

Ñ   the output depends upon the combined effort of a team.

Under these circumstances, a group bonus based on the results of the team effort may be introduced[3].

Principal Group Bonus Schemes

Sometimes the idea of group bonus may be extended to the whole factory. The various schemes which may be introduced for this purpose may include the following:

Ñ   **Priestman's Production Bonus:** Under this system, a standard is fixed in terms of units or points. If actual output, measured similarly, exceeds standard, the workers will receive a bonus in proportion to the increase. Therefore, this system can operate in a factory where there is mass production of a standard product with little or no bottlenecks[4].

Ñ   **Rucker, or "Share of Production" Plan:** According to this plan, employees receive a constant "if; proportion of the 'added value' or 'value added'- The term value added is defined in the *Terminology* as follows:

1   Horngren, C.T., Accounting for management Control,(New Jersey, Prentice-Hall),1978
2   Ibid., p. 34.
3   Joseph F. Bradley, Administrative Financial Management, 2007, p.104.
4   Fremgen,op.cit.,p.153

The increase in realizable value resulting from an alteration informs location or availability of a product or service, excluding the cast of purchased materials and services.

Note: Unlike conversion cost, value added includes profit.

The value added concept has become increasingly important in recent years. Many firms are using it both as a measure of performance and as a labour incentive scheme[1]. Value added measures the value added by an enterprise to its product or the provision of a service. In other words,

$$VA = Sales \ less \ cost \ of \ bought\text{-}in \ materials \ and \ services$$

or

$$VA = Profit \ before \ tax + Conversion \ costs + Other \ costs$$

Where conversion costs include manufacturing labour and manufacturing overheads, and other costs include administration, selling and distribution costs (including interest, depreciation, etc.). In introducing an incentive scheme based on value-added, a ratio of labour cost to value added is set based on normal relationships. Any reduction in the ratio entitles appropriate bonus payment. According to Rucker, labour will receive a constant proportion of 'added-value'[2].

The value-added scheme appears to be a more satisfactory method than the normal profit-sharing scheme for many reasons. But profit-sharing schemes are still relatively widely used in industry. However, this system presupposes a great deal of consultation between management and workers so as to make the effort more effective.

Ñ   **Scanlon Plan:** This plan is similar to the Rucker plan except that it adopts the ratio between wages and sales value of production[3].

Ñ   **Towne Gain Sharing Plan:** According to this plan, 50% of "gain" (savings in cost) is paid to individual workers pro rata in addition to their basic wages. Here bonus is calculated on the basis of reduction in labour cost vis-a-vis the standard set. The supervisory staff may also receive a share of the bonus.[4]

Incentive Schemes for Indirect Workers

One of the main conditions of the incentive systems is that actual output and/or time taken in relation to standard set is determinable. In case of direct workers the measurement of performance does not involve any problem. But in ease of indirect workers, whose performance cannot be directly measured (e.g., supervisors, machine maintenance staff, staff of stores, internal transport, packing, dispensing, canteen, etc.), introduction of an incentive system may appear to be difficult. Still it is essential to provide for incentives to the indirect workers for the following reasons:

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[1]   Ibid,p.86

[2]   R.M. Copeland and P.E. Dashcher,Cost Accounting, (John Wiley and Sons, New York,2009),p.382

[3]   Fremgen,op.cit.,p.233

[4]   D.T. Decoster and E.L. Schafer,Cost accounting, (John Wiley and Sons, New York,2011),p.204

Ñ   If direct workers are rewarded for their efficiency, there is no reason why the indirect workers should not be brought under some incentive schemes.

Ñ   When only direct workers enjoy incentive schemes, indirect workers who work side by side with them are dissatisfied with such discrimination. This, therefore, affects morale and hence efficiency of the indirect workers. On the other hand, an incentive scheme for indirect workers will increase their efficiency and promote team spirit[1].

Ñ   When the work of the direct workers is related to or dependent upon that of the indirect workers, any deficiency on the part of the latter due to lack of incentive schemes will also affect adversely the efficiency of direct workers. As for example, if the plant and machinery is not properly and regularly maintained by the staff concerned, the efficiency of machine operator is bound to decrease. Therefore, to attain all round efficiency it is necessary to have incentive schemes both for direct and indirect workers.

For the purpose of incentive schemes, indirect workers may be grouped as under:

Ñ   Indirect workers working with direct workers, e.g., supervisors, inspectors, checkers, transport workers, etc. In this case, bonus may be based on the output of direct workers whom the indirect workers serve[2].

Ñ   Indirect workers rendering general service, e.g., sweepers, canteen workers, dispensing staff, maintenance staff, etc. Bonus to be paid will be determined on a wider basis, e.g., output of a department or of the whole factory, a percentage of bonus payable to the direct workers, job evaluation, merit rating, etc[3].

In designing an incentive scheme for the indirect workers, the following points must be considered:

Ñ   It should be guaranteed for a specific period, e.g., weekly, monthly, half-yearly, yearly, etc.

Ñ   It should be so organized as to achieve all round efficiency.

Ñ   It should be paid at regular intervals.

Ñ   Rewards should be related to results.

A few examples of incentive schemes to indirect workers are stated below.

•   **Bonus to foremen and supervisors:** Supervisors and foremen may be paid a weekly or monthly bonus based upon the following:

   ▪   output of the section or department concerned;
   ▪   savings in time or expenditure effected over the standards set;
   ▪   overall improvement in efficiency;
   ▪   improvement in the quality of product;
   ▪   reduction of scrap and waste; and
   ▪   reduction of labour turnover[4].

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[1]   J.M. Fremgen, Accounting for Managerial Analysis, (Richard D. Irwin, Homewood, Illinois, 2011),p.328
[2]   Anothony and Welsh,op. cit.,p.407
[3]   Chatfield, M. and Neilson, Denis, Cost Accounting, (Harcourt Brace Jovanovich,New York), 2012,p.987
[4]   C.L. Moore and R.K. Jaedicke,op.cit.,p.406

Incentive for supervisors and foremen would assist in:

- Reducing idle time, scrap, waste, etc.
- increasing production and productivity, and
- Reducing costs (this is possible if production and productivity are increased).

Ñ **Bonus to repairs and maintenance staff:** For routine and repetitive maintenance, a group bonus system can be established on the basis of reduction on the number of complaints or reduction in breakdown[1]. Alternatively, efficiency percentage can be evaluated for the purpose of payment of bonus.

Ñ **Bonus to stores staff:** It may be based on value of materials handled or number of requisitions. When standards are set, efficiency percentage may be calculated for the purpose[2].

Other Incentive Schemes

Indirect Monetary Incentives

Of late, employees frequently receive additional remuneration based on the prosperity of the concern. The principal schemes under this heading include:

Ñ Profit-sharing, and

Ñ Co-partnership

These schemes are becoming more and more widespread and are growing in importance.

- **Profit-sharing:** Under this scheme, the employees are entitled, by virtue of an agreement, to a share of profits at an agreed percentage in addition to their wages. Sometimes, a minimum period of service is a condition of participation in the scheme. This type of scheme recognizes the principle that every worker contributes something towards profits and hence he should be paid a percentage thereof[3]. In India, profit-sharing schemes take the form of an annual or other periodical bonus. In other words, the "available surplus" is generally distributed amongst three parties:

Ñ The shareholders,

Ñ The industry,

Ñ The employees.

There were considerable disputes as regards the quantum of bonus to be paid to the employees. The Govt. of India set up a Bonus Commission and on the basis of its report the Payment of Bonus Act had been adopted in 1965. Under this Act, the minimum and maximum bonus payable is respectively $8\frac{1}{3}\%$ and 20% of salary.

Ñ **Co-partnership:** Under this scheme, employees are allowed to have a share in the capital of the business and thereby to have a share of the profit. The shares held by the

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[1] National Association of Accountants, Research Series No.23,New York, quoted in C.L. Moore and R.K. Jaedicke, op.cit., p.410

[2] C.T. Horngren, Introduction to Management Accounting,(Prentice-Hall, Englewood Cliffs, N.J., 2012), p.455

[3] Ibid.,

employees may or may not carry voting rights. When co-partnership operates in conjunction with profit-sharing, the employees are allowed to leave their bonus with the company as shares or as a loan carrying lucrative interest.

Non-monetary Incentives

These types of incentives relate more to the conditions of employment rather than to job functions. The objectives behind these schemes are two-fold:

Ñ   Making the conditions of employment more and more attractive, and

Ñ   Promoting better health amongst the employees so as to build up a happy and contented staff.

Non-monetary incentives may be entirely free or subsidized by the company. They are wide in number and may include:

Ñ   Canteen—free or subsidized
Ñ   Health and safety
Ñ   Recreational facilities
Ñ   Housing facilities
Ñ   Educational and training
Ñ   Pension, Provident Fund schemes, etc.[1]

Conclusion

Labour cost control will, in effect, lead to minimization of cost of labour per unit of output. In India, a major part of labour cost is fixed and not variable. Accordingly, an increase in output, other things remaining constant, for a given amount of labour cost will not only result in lower unit cost of labour but also that of overhead. It may be pointed out, in this connection, that labour is not a commodity and it does not behave like a commodity. From this angle, the task of exercising control over labour cost is even more difficult than of material cost or other expenses. The following departments help to exercise control over labour cost by coordinated efforts: (1) Personnel department, (2) Engineering and work study department,(3) Time-keeping department, (4) Payroll department, (5) Accounting department. Control over labour cost includes control over the following activities:

•   Recruitment, giving increments and promotions.
•   Formulation of wage policy and schemes, and payment and accounting of wages.
•   Allocation of cost.

The following factors must be given due consideration before selecting a system of payment:

Ñ   Simplicity
Ñ   Quantity and quality of output
Ñ   Effect upon workers
Ñ   Statutory provisions

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[1]   Dearden, J.,cost Accounting and Financial Control System,(California,Addison-Wesley Pub.co.),2011

Essential features of an effective wage plan may be enumerated as follows: (1) It should be based upon scientific time and motion study to ensure a fair output and a fair remuneration. (2) There should be guaranteed minimum wages at a satisfactory level. (3) The wages should be related to the effort put in by the employee. It should be fair to both the employees and employers. (4) The scheme should be flexible to permit any necessary variations which may arise. (5) There must be continuous flow of work. After completing one piece, the workmen should be able to go over to the next without waiting. (6) After a certain stage, the increase in production must yield decreasing rate so as to discourage very high production which may involve heavy rejections. (7) The scheme should aim at increasing the morale of the workers and reducing labour turnover. (8)The scheme should not be in violation of any local or national trade agreements. (9) The operating and administrative cost of the scheme should be kept at a minimum.

The various method of remuneration may be broken down into the following main heads:

Ñ   Time rates
Ñ   Piece rates
Ñ   Combination of time and piece rates
Ñ   Premium Bonus Schemes
Ñ   Group Bonuses
Ñ   Others Incentive Schemes.

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