

**Formulation of incentive scheme for a batch type production firm**¹Hariprasad K N, ²P M Ajith.¹M.tech, Industrial Engineering and Management, Department of Mechanical Engineering, RIT, Kottayam²Associate Professor, Department of Mechanical Engineering, RIT, Kottayam

Abstract - It is a common practice that incentive schemes are executed in manufacturing firms for the motivation of employees, increased the production rate and for attaining financial sustainability. But if the scheme was not developed according to the industrial parameters and attributes it won't be that much of effective as expected to be. This paper discusses the systematic method to develop a cash incentive scheme for a rubberized coir mattress industry instead of a point rate system, in which the target of employees for incentives is not set properly.

Key words: Employees, incentives, point based, target.

1. INTRODUCTION

Incentives are a force that causes employees to behave in certain ways and on any given day, they may choose to work as hard as possible at a job. Meanwhile, incentives are designed to get the maximum performance from the employees and help retain the most productive among them. Reward system, reward strategy, incentive plan, incentive structure etc. are all terms used in the literature describing the systems or plans organizations utilize in order to influence the behavior of its employees.

Similar to reward systems, what kind of incentives the organization offers to its employees will influence the behavior of individuals within the organization. In a paper by Kadefors and Badenfelt (2009), the authors define three roles for incentives in organizations. The first role being, incentives as sources for extrinsic motivation, here the focus is on the direct effect incentives have on individuals. The symbolic role of incentives is also recognized, meaning that intrinsic motivation, trust and collaboration may be enhanced or decreased based on how the underlying incentive is perceived. Lastly, the third role relates incentives to the influence on organizational processes and is called; incentives as process generators

2. LITERATURE REVIEW**2.1 Incentives**

Adequate incentives have been found to be one of the means through which organization can adopt to motivate and increase their workers' performance. There are many studies in the literature, which examine the monetary and nonmonetary incentives and their effects on organizational variables (Al-Nsour 2012; Scheepers 2009; Pouliakas 2008; Pinar 2008; Arnolds and Venter 2007; Kaya, 2007; Sezen 2002). Incentive programs are put in place by various organisations to compensate and reward performance of employees who perform more than expectation (Schiller 1996). Incentive packages are financial or non-financial rewards offered to employees to compel them to exert more effort into any giving task (National Commission on Productivity and Work Quality 1975). Incentives is a force that cause employees to behave in certain ways and on any given day, they may choose to work as hard as possible at a job, to work just hard enough to avoid a reprimand, or to do as little as possible (Griffin, 2002). Meanwhile, incentives are designed to get the maximum performance from the employees and help retain the most productive among them (Arnold 2013). Organization can consider a variety of ways to reward the employees for their work performance, but an organization need to consider using the best employee incentives to get the desired results. Incentives are an instrumental drive towards employee motivation and performance and it has great benefits and high potentials to motivate workers to put in their best in any giving task (Condly et al. 2003). "High productivity may be determined by workers employees" ability to work and therefore employees that are not well rewarded produce less" Koontz (1984). Luthans (1998) divided these incentives into monetary incentives and non-monetary incentives which is also known as financial or non-financial incentives. Meanwhile, employees could be intrinsically or extrinsically motivated. Intrinsic motivation is an inward drive coming from within the person which makes him to work effectively and efficiently toward the realization of organizational productivity (Ryan & Deci, 2000). It arises from natural psychological needs, such as needs for competence and autonomy (Deci & Ryan, 1985; Kasser & Ryan, 1996). It is a self-generated urge that comes from inside an employee and influences him/her to work harder. They are connected to job related and social incentives such as opportunity to use one's ability, interesting work, recognition of a good performance, development opportunities, a sense of challenge and achievement, participation in decision making, and being treated in a caring and thoughtful manner etc. On the other hand, extrinsic motivation exists when behaviour is performed to attain externally administered incentives. Extrinsic motivation is related to

“tangible” incentives such as wages and salaries, fringe benefits, cash bonuses, security, promotion, wall plaques, free dinner or movie tickets etc. (Pattanayak, 2005) Intrinsic and extrinsic incentives are two important tools in ensuring motivation, commitment and satisfaction of employees in the world of work. It is therefore possible to state that nonmonetary incentives as a motivational tool address both intrinsic and extrinsic motivation concepts. While monetary incentives may only be classified as a factor leading to extrinsic motivation. Therefore, for employees to remain efficient and highly productive, and competitive, management need to understand why individuals and group behave the way they do, so that they can be satisfied, happy and highly productive (Oyedijo, 1995).

2.2 Monetary incentives Monetary incentives are used by employers of labours to retain their best brains and as well compensate them for a job well done and excellence of job performance through monetary form. (Nelson, 2003, Kepner, 2001) The incentive can come in many forms: basic salary, compensation, insurance, profit sharing, retirement plans, employee stock, overtime pay, attendance incentives, competition and contests, output-Oriented merit increases, performance Bonuses, piecework, safety incentives, suggestion Awards etc (Pattanayak, 2005; Cole, 2002; Kepner, 2001). Monetary incentive is used to describe incentive-payment plans which ties incentives directly or indirectly to productivity standard (Ubeku, 1975; Alaba & Owodunni, 2007).

2.3 Nonmonetary Incentives Nonmonetary incentives are to reward employees for excellence job performance through opportunities (Kepner, 2001). It usually come in form of more enabling authority, award, participating in the management, promotion, holidays, better working environment, written recognition, gifts, formal dinners, informal parties, plaques, etc. (Ellis and Pennington, 2004; Spector, 2003; Chaing & Birtch, 2008; Hijazi, Awar & Mehbood, 2007).

2.4 Effect of Incentives On Workers Attitudes Although employee attitudes such as satisfaction are not a major determinant of job performance (Spector, 2003) but contribute to (or discourage) absenteeism, reduction in the wastages, industrial accidents and they help establish the culture of the organization (Edward, 2009) Four major generalizations about employee attitudes and incentives as noted by Edward (2009) are (i.) employee satisfaction is influenced by how much is received and how much the individual thinks should be received. (ii.) Employee satisfaction is affected by comparisons with what happens to others. (iii.) Employees often misperceive the incentives of others. (iv.) overall job satisfaction is affected by how satisfied employees are with both the extrinsic and the intrinsic rewards they derive from their jobs.

2.5 Incentives Theories Individual employee is motivated by different incentives or benefits and it is important to know how they are motivated and what can satisfy them in order to encourage them to have right attitudes to work which will invariably enhances employee performance and organizational productivity. The incentive theory is one of the major theories of motivation and suggests that employees are motivated to do things out of a desire for incentives (Bernstein, 2011, Hockenbury & Hockenbury, (2003). Maslow (1954) argued that employees are motivated to satisfy five need levels: physiological needs, security need, belongingness need, self-esteems and self-actualization organizations, the needs are generally satisfied by adequate wages/salary and the attractive incentive packages. Griffin, 2002). Herzberg (1959) posited that satisfaction and dissatisfaction are driven by different factors; motivation and hygiene factors and employee's motivation and commitment to work is proportional to employees' satisfaction. Therefore, incentives are intrinsic drive that compel individual employee to attain both personal and corporate goal (Hockenbury, D. H. & Hockenbury, S. E. 2003). He added that motivation factors are instrumental to the willingness of employees to perform optimally, and this provides people with satisfaction such as achievement in work, recognition, promotion opportunities. These motivating factors are considered to be fundamental to the employees' job performance. Expectancy theory by Vroom (1964) opined that motivation largely depends on the individuals' expectations about their ability to perform any giving tasks in anticipation to receive desired and commensurate rewards, (Daft, 2003). The basis of the expectancy theory of motivation is the relationship between the effort, performance and outcomes, the impute of employees determines the reward package. Expectancy theory posited that individual or group effort leads to performance and the outcome of their performance is related to their incentive packaged. Sequel to the above, incentive packages is a motivating drive that enhances the employees' right attitudes to work and this will invariably propel them to be committed and willing to work hard in anticipation of what they stand to get in return of the impute.

2.6. The importance of the study The survey became necessary because of the unproductive attitudes of employees towards work in the public sector. Having understood from the above literature reviewed that incentive packages are one of the major underlining cause that can make the employees perform optimally in their job. This study is however necessary because it will help with identifying the incentive packages that the management or the government, as the case may be, needs to put in place to earn employees commitment and productivity.

Incentives are considered beneficial to both employers as well as employees in following ways.

- Workers are likely to work at their best when they are offered monetary rewards for good performance.
- Provide opportunity for hard-working & ambitious employees to earn more.
- To improve work-flow, work methods & man – machine relationship.
- To bring employee involvement to make employee innovative.
- Incentives are the sound technique of improving productivity.
- Help to improve discipline and industrial relation.
- The cost of supervision is reduced.
- To obtain desired result.

2.2 Fairness

- The goals or reference standards set out for employees must be attainable. Otherwise, rather than motivating staff, the incentive scheme will have a detrimental effect on their motivation and performance.
- Staff members who perform better than others should receive higher compensation. This fact should be understood by everyone in the organization.
- When staff members work harder and produce better results, they should receive a higher compensation.
- The compensation system should reflect the hierarchical levels within the organization.

2.3 Transparency

Staff incentive schemes should be kept simple enough that they can be understood by all who are affected by them.

- As much as possible, incentive schemes should be based on measurable, “objective”, variables rather than subjective performance indicators. As we will see, this goal may sometimes be difficult to accomplish, but the use of subjective variables automatically reduces the system's transparency.
- It is important that the “rules of the game” be known to everyone affected by the scheme. The rules of the game are constituted by such things as performance measurements, minimum requirements, and any formulae used for calculating individual payouts. They should be communicated clearly and posted on the notice board or in the computer system. In addition, the scheme should not be changed too frequently – otherwise the organization risks making the relationship between performance and compensation unpredictable for staff members

3. METHODOLOGY

3.1 Incentive formula

At present, the firm mentioned in this paper uses point based incentive scheme, in which the employees get rewarded with points for each units as they once crossed the target set by the firm. The points will be differ based on the difficulty factor of each units produced. The target set by the firm with non-feasible assumptions leads the employees to cross it easily hence high incentives are being paid to the employees even when the production rate was low.

The new formula proposed is based on cash incentive formula which accounts the change in parameters and attributes that constitutes to the incentive calculation of the firm. The amendments made to this formula are suits to the process and working of a rubberized coir mattress industry. Figure 1 shows the formulated incentive formula

$$\text{Incentive} = \frac{(\text{Achievement} - \text{Min. Requirement})}{(\text{Reference Value} - \text{Min. Requirement})} * \text{RI} * \text{W}$$

Where, **RI** = Reference Incentive

W = Weightage

- Reference Value is the value that a well performed employee can produce.
- Reference Incentive is the incentive given to the reference value.
- Weightage is given based on the difficulty of task.

With this formula incentives can be calculated with a detailed Rate table which constitutes the change in parameters and attributes like minimum requirement, production rate, salary, percentage of salary to be paid as incentive etcetera. Each parameter from rate table like minimum requirement, reference value, work norm, weightage etcetera are found out systematically followed by conducted time study in the firm.

3.2 Rate Table

Rate table are for choosing the incentive norms. From the rate table the incentives are calculated by applying on the incentive formula. The format of a rate table is given below.

MOD ELS	MINIMU M REQUIR EMENT (per month)	REFER ENCE VALUE (incentiv e of a skilled employe e)	REFER ENCE INCENT IVE (% of salary)	WEIGHT AGE (based on difficulty of job)

Table 3.2 Rate Table

The features of this incentive scheme:

- The scheme uses formulae and linear relationships. Every (small) change in performance leads to a corresponding change in incentive.
- This scheme makes use of reference values. These reference values can be changed if and when overall performance improves.
- Theoretically there is no limit on the incentive that can be earned by excellent employees.
- This model is rather simple and understandable.
- The scheme also avoids the negative incentive effects of staged systems.

3.3 Quality Performance Factor

It is not needed to increase the number of production only, the produced products must be better in the case of quality also. Hence for calculating the incentive the quality performance factor also needs to be considered. It has some steps for calculating the incentive on the basis of quality performance factor. The quality of the factor has considered after the process of inspection.

Steps for transforming **quality performance factor** into incentive scheme

- Calculate the incentive for the number of products produced by the employees.
- Check the number of poor quality products produced.
- For each poor quality product deduct a percentage of incentive calculated.

Number of poor quality products	% of deduction
Less than 0	0.1
Between 10 to 50	0.5
Above 50	0.75

Table 3.3: Transformation of poor quality to incentive

3.4 Implementation

Implementation can be done in two different ways:

- Direct application of values into the formula
- Implementation after changing the percentage set by the management.

The result of implementing the proposed formula in the rubberized coir mattress factory shows a significant change between the incentives paid using the point based scheme, in which target is not set properly and the proposed formula.

4. CONCLUSION

Incentives are aimed to maximize the productivity and financial performance of the firm through employee motivation. But the problems associated with a systematic development of incentives with standards leads the institution into a financial instability. The proposed incentive scheme ensures a fair chance for employees to earn monetary benefits that directly contribute to the financial sustainability of the firm. an extra measure for quality considerations are also taken into account that motivate the attitude of employees to produce more with good results. The comparison of existing incentive scheme with the proposed formula clearly shows the difference in incentives paid as it focuses on the consequences of a faulty developed incentive scheme.

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