



OPEN ACCESS INTERNATIONAL JOURNAL OF SCIENCE & ENGINEERING

A ANALYSIS ON IMPACT OF INCENTIVE PAYMENT SYSTEM AMONGST EMPLOYEE OF MANIPUR MANUFACTURING INDUSTRIES: A CASE STUDY OF THANGJAM AGRO INDUSTRIES PVT. LTD. AND BLL ENTERPRISE PVT. LTD.

¹Makakmayum Baadshah, ²Dr. Priyanka Gupta, ³Dr. Kheiruddin Shah

¹Research Scholar, ²Professor, ³Associate Professor

¹Research Scholar, Shri JJT University, Rajasthan, India, 33300.

²Professor, Shri JJT University, Rajasthan, India, 33300.

³Associate Professor, Department of Commerce, Dhanamanjuri University, Imphal, Manipur, India

¹mughal7861khan@gmail.com, ²Apdrpriyankaraj@gmail.com, ³dr.kheiruddinshah@gmail.com

Abstract: The purpose of this paper is to describe the impact of the compensation schemes on factors that affect the performance of employees. The study explores the impact of incentives on a variety of variables, including motivation, absenteeism, employee turnover, production and performance, employee morale, health and working conditions, teamwork, rewards and employee satisfaction. Data were obtained by questionnaire from 120 respondents in all categories. The data analysis was carried out on the basis of the mean score, an unbiased study of z-test was used to find any disparity between employees in the compensation schemes, and observations and conclusions were drawn from all three groups of employees. General satisfaction is seen in all forms of workers. The overall study showed that reward programmes produce satisfactory results in improving the productivity of workers, apart from increasing employees' salaries and other benefits.

Keywords: Absenteeism, Incentive, Motivation, Performance, Reward

I INTRODUCTION

Employee Compensation based their work plays a vital to enhance the stability and satisfaction of the employee and it helps to provide better outcome to employer in terms of productivity and customer satisfaction. Incentive system is considering as a major tool to enhance the employee satisfaction and to boost the productivity of an organization. In the literature various analysis were conducted to analysis the current incentive schemes and to investigated the outcome of those incentive schemes. But a clearly picture to know about the employees satisfaction level by the current incentive schemes in Indian organizations was not found. Hence in this research we motivate to conduct an empirical research to evaluate the various incentive incentive schemes in Indian organizations and to evaluate the outcome of these incentive system.

In India in 1946, the reward system was launched, but it still is underdeveloped. The reward programmes are not standardised. Every factory, business and institution has

adopted numerous schemes which it believes are better or more convenient. In addition, these schemes are not focused on motion and time tests, work assessments or syndicate consultations. Enterprises should not meet any guidelines when implementing reward programmes as far as possible. Payment of benefits did not inspire workers to produce better results, because inflation currently robs the enjoyment of additional payment. Consequently, benefits must be justified. Every reward factor in our country is not negative. The goal of enhanced efficiency is accomplished in many establishments and businesses. If group reward systems are in use, there is no direct correlation between efforts and earnings that would cause a system to fail to function effectively.

Monetary Incentives

The term "Pay for Performance" refers to compensation options such as merit pay, commission, individual incentive, group incentive, gain sharing scheme. Pay for performance aims at increasing productivity and lower personnel costs. Under this scheme, the compensation payable is tied to employee effort and performance.

Non-Monetary Incentives

The aim is to provide monetary motivation motivator, but several non-monetary factors are also important and function wonderfully. Non-financial rewards are the open sandwiches of advantageous items available to companies. The establishment of these awards depends on the creativity and expertise of the executive in determining payments. Note here, what someone likes is gross. The executive has the opportunity to compare and figure out who they want to be.

These non-monetary benefits include any of the following:

An employee who wants a strong membership will accept employment which is socially desirable and satisfactory. Some factors, such as sophisticated furniture, paintings on walls, personal assistants, respectable work, cards to be visited, nameplate etc., are regarded as a status symbol. People who want control will respond and achieve positive results in accepting the administrative burden. Loving the work of an employee before his colleagues and his groups will inspire him to work better. These acts also inspire others. If employees have gained experience in convincing him to take part in a challenging mission, he is happy and has his 100% ability. More accountability can be granted in appreciation of the employee's seniority. The best safety performer award will contribute to excellent work for the employee.

The major objective of this research to investigate the incentive systems followed in two manufactures Thangjam Agro Industries Pvt. Ltd., and BLL Enterprise Pvt. Ltd. Thus, to attain the following sub objectives: Conduct an emperical research based on a standard questionnaire. Evaluate the various incentive schemes of these two organization, irrespective of their position and job area. Investiage the impact of monetary and non-monetary incentive to enhance the employee retention, engagement and satisfaction. Ultemately to evaluate the impact of outcome of incentive scheme in terms of competitive edge, productivity and employee satisfaction.

The listed objectives can attain by an emperical study based on the questionnaire based survey. The data will be formed based on the response gathered from around hundred respondents, combinedly from both the organizaions.

In this Paper, we are explain the intensive , in second section related to litersture survey , in third section we have explain methode of research , and finally Result analysis , conclusion.

II RELATED WORK

2.1 Reviews on Industries Offering Incentives.

Burhop, C., & Lübbers, T. (2010) have investigated principal problem faced by the agents who working in electrical engineering and chemical industries. They found that the

bouses system has a positive correlation or impact, whereas the income was not satisfied to the employees. The personnel management like employee motivation was raised a question among industries. In particular the employees in service sector were not properly motivated. So as a modern concept was emerged for the motivation of service industries. Grynko, T., et al. (2017) have determined the reason to develop a modern concept of material and immaterial motivation of staffs in service industries. Their analysis found that there was no proper metric to analysis and identify the effective employee among the expert and scientific community.

Pai, M. K. (2016) have investigated the various strategies of firms for enhancing the productivity. They have applied the Cobb-Douglas stochastic frontier production model to firm level data. Then based on the analysis they suggested a technology update to increase the production growth. Ikäheimo, S., et al. (2018) has evaluated the incentives for white-collar employees. They also evaluated the firm's profitability in addition to the task complexity analysis. They proved that the performance-based incentives for white-collar employees have significant and positively impacted to the enhancement of organization in terms of return on equity, return on assets and profit margin ratio.

2.2. Review based on Monetary Incentive Scheme

Cainarca, G. C., et al. (2019) have addressed various roles of monetary incentives to an employee based on their performance offered by the organization. Here the authors have investigated the distribution of monetary incentives to employees in an administrative role. Generally, in administrative roles, the designation or position gave more privilege to an employee. These premium position or designation mostly based on the merit of an employee. But it was observed that for some administrative role the monetary incentive enhances the involvement and performance of the employee.

Ponta, L., et al. (2020) have also evaluated the role of monetary incentives for the employees in public administration. In particular, the distribution of monetary incentives among the employees was based on the position held, which was compared with a merit approach which tends to recognize and reward individual contributions. Based on the analysis they showed the distribution of monetary incentives according to merit criteria rewards the employee performance and has positive effects on the employee performance in the short term.

Nnubia, A. L. (2020) has examined the effect of monetary incentives on employee's performance in manufacturing firms in Anambra State. Their intension was to evaluate the various remunerations by an organization in terms of wages, salary, bonuses as well as commission. Their analysis

outcome suggested that the monetary incentive played an important role in every human resource management. The monetary incentive also enhanced the productivity of the organization.

2.3. Review based on Non-Monetary Incentive Scheme

Ramirez, C. (2017) have analysed the organizational behaviour, and economics have shown increasing interest in the link between non-monetary, extrinsic incentives and employee productivity. Initially they have examined the awarding of private, non-monetary badges for hitting performance targets. Then they have analysed the actual incentive scheme that has a unique characteristic: it combines both symbolic and pecuniary incentives under the same platform. Finally analysed the variations in worker compensation in the copper mining industry. The results showed the positive effect of copper price on workers' compensation, but this effect was moderated by the characteristics of labour regulation in each country.

Noor, W. S. W. M., et al. (2018) have studied the dimensions of cultural orientation that may impact the perception held by employees of Malaysian private organizations towards non-monetary and monetary rewards. They further examined the link of the perceptions of non-monetary and monetary rewards with desired employee outcomes. They identified rewards alignment practices as a noticeable management tool to foster greater employee outcomes.

2.4. Review based on Employee Outcome based on Incentive Scheme

Cainarca, G. C., et al. (2019) have addressed various roles of monetary incentives to an employee based on their performance offered by the organization. Here the authors have investigated the distribution of monetary incentives to employees in an administrative role. Generally, in administrative roles, the designation or position gave more privilege to an employee. These premium position or designation mostly based on the merit of an employee. But it was observed that for some administrative role the monetary incentive enhances the involvement and performance of the employee.

Khan, A. A., & Roy, I. (2019) have explored the impacts of employee turnover on organizational performance and to determine how employee turnover affects the overall achievement and growth of the organization. The analysis was carried the data, which are collected from private bank in Bangladesh. The study concludes that most of the employees of these banking sectors are fell freedom and satisfied but they felt to leave the job due to high pressure from supervisor, work load and insecure job feeling.

Ponta, L., et al. (2020) have also evaluated the role of

monetary incentives for the employees in public administration. In particular, the distribution of monetary incentives among the employees was based on the position held, which was compared with a merit approach which tends to recognize and reward individual contributions. Based on the analysis they showed the distribution of monetary incentives according to merit criteria rewards the employee performance and has positive effects on the employee performance in the short term.

Nnubia, A. L. (2020) have examined the effect of monetary incentives on employee's performance in manufacturing firms in Anambra State. Their intension was to evaluate the various remunerations by an organization in terms of wages, salary, bonuses as well as commission. Their analysis outcome suggested that the monetary incentive played an important role in every human resource management. The monetary incentive also enhanced the productivity of the organization.

III METHODOLOGY

3.1 Research Instrument

This research is carried out to analyses the incentive schemes to enhance the growth of an organization. To major hypothesis considered to solve from this research is, (a) identifying various incentive schemes followed in private organization; (b) evaluate the impact of monetary and non-monetary incentive among employees; (c) analysis the outcome of employee with respect to the various incentive schemes. In this analysis employees from two well know manufactures from Manipur, India such as Thangjam Agro Industries Pvt. Ltd., and BLL Enterprise Pvt. Ltd.

Research wants to quantify the mean and variability of different product types across various incentive schemes in organizations. A structured questionnaire designed to understand the employee outcome based on the incentive schemes followed in the organizations. The developed questioner includes major details as, personal information, education detail, job category, kind of incentive they are obtaining and so on.

The overall empirical study is intent to analysis the employee retention, engagement and satisfaction. Then further to observe the outcome of organization in terms of Competitive edge, Productivity, and Customer satisfaction. The overall ranking is measured using a weighted arithmetic average based on Saluja, R. et al. (2018).

3.2 Data Collection

The response for the above described questionnaire is obtained from employees of as Thangjam Agro Industries Pvt. Ltd., and BLL Enterprise Pvt. Ltd. Total responders participated in this questionnaire section is 100. Then the

IBM SPSS Statistics used to conduct various analysis such as compare mean, factor analysis, and sample paired t test.

3.3. Correlation Analysis

It is a knowledge processing method focused on statistics and therefore on mathematics. It involves the study of the relation between at least two variables , e.g. two database fields or one log or raw data field. The result will indicate the intensity and direction of the link.

This approach is well known, with many information tools available to everyone to access and evaluate their own values.

To date the application of the correlation in the areas natural sciences, economics , psychology, and so forth has been very broad and varied and naturally in all forms of study. The bases are the same, but they are still being established at this moment in terms of the field of information security.

Relationship mathematical principles:

Two quantitative variables will be evaluated as typical. It can be linear, polynomial, logarithmic, etc. We use the Least Squares Approach for this. It is the reduction in the error of the measured relation relative to the fact, i.e. the minimum of the standard difference of the residual regression (mean squared error)

$$MSE = \frac{\sum_{i=1}^n (e_i)^2}{n}$$

where, ‘ e_i ’ is the difference for each element between the real observation and the estimated datum Estimated real data versus data, and n is the number of elements observed. Thus, applying a linear adjustment,

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \varepsilon$$

In the simplest case: with a dependent variable and an independent variable, we would have

$$Y = \alpha + \beta_1 X_1 + \varepsilon$$

Resulting from this is Pearson’s Correlation Coefficient, the best-known correlation coefficient:

$$R = \frac{\sigma_{xy}}{\sigma_x \sigma_y}$$

where, ‘ σ_{xy} ’ is the covariance of variables ‘X’ and ‘Y’, ‘ σ_x ’ is the standard deviation of variable ‘X’, and ‘ σ_y ’ is the standard deviation of variable ‘Y’.

3.4. Principal Component Analysis

Primary component analysis or PCA is a dimensionality reduction technique, often used to minimise the dimensionality of larger data sets by converting a large number of variables into fewer, but with the majority of the data in large quantities.

It is naturally expensive to cut the number of variables in a data set, but the trick in reducing dimension is to adjust precision a little for simplicity. Since smaller data sets allow the data analysis much simpler and quicker to explore and view without international variables, for machine learning algorithms.

In short, the concept of PCA is simple, while retaining as much information as possible, to minimise the number of variables in the data set.

PCA describing step by step

Phase 1: Normalization

This phase is intended to standardise the continuum of continuous initial variables such that they contribute to the analysis equally.

In particular, the reason why standardisation is important before PCA is because the latter is very sensitive to variances of the initial variables. In other words, if the variables with larger ranges are large, the variables with small ranges (for example, a variable ranges from 0 to 100 over a variable ranging from 0 to 1) would prevail, leading to biased outcomes. This can be avoided if the data are converted into comparable scales.

This can be achieved mathematically by subtracting the mean and dividing each value of each variable by the standard deviation. All variables are converted to the same scale once the standardisation is complete.

$$z = \frac{\text{value} - \text{mean}}{\text{standard deviation}}$$

Step 2: Covariance Matrix Computation

The purpose of this step is to understand how the variables in the data set differ or, in other words, whether a relationship exists between them. Since variables are often highly correlated to provide redundant information. Thus, we calculate the covariance matrix to determine these correlations.

The covariance matrix is one that has as entries the covariances connected to all possible pairs of the initial variables. (p is the sum of dimensions) For example, the covariance matrix is three equal matrix from a 3-dimensional dataset with 3 variables: x , y and z.

$$\begin{bmatrix} Cov(x,x) & Cov(x,y) & Cov(x,z) \\ Cov(y,x) & Cov(y,y) & Cov(y,z) \\ Cov(z,x) & Cov(z,y) & Cov(z,z) \end{bmatrix}$$

Since the covariance of a variable with itself is its variance (Cov(a,a)=Var(a)), in the main diagonal (Top left to bottom right) we actually have the variances of each initial variable. And since the covariance is commutative

(Cov(a,b)=Cov(b,a)), the entries of the covariance matrix are symmetric with respect to the main diagonal, which means that the upper and the lower triangular portions are equal.

Step 3: Compute the Eigenvectors and Eigenvalues of the Covariance

Auto vectors and value of the entity are the linear principles of algebra which must be calculated from the covariance matrix to evaluate the key data components. Let us first understand what we mean by the key components before we get to know these concepts.

The key components are new variables built as linear or initial variables mixed combinations. The combinations are rendered so that the new variables (ie, key parts) are uncorrelated and most information is squeezed or compressed into the first components within the initial variables. The idea, for example, is 10-dimensional data that gives you 10 major components, but PCA attempts to provide as much details as possible in the first component, and so on, before anything like it appears in the plot below.

This will allow you to arrange the information in the main components without losing much information by dismissing the components with low information and taking the remaining components as your new variables.

One thing that is important to note here is that the key components are less interpretable and have no real significance since they are built as linear combinations of the initial variables.

The main components reflect geometrically the data directions which explain the maximum variance, i.e. lines that capture the largest amount of information on the data. In this connexion, the greater the variation that is borne by a line, the greater the distribution of data points along it, and the greater is the distribution along a line, the greater the information it has. Simply put, simply think of the main components as new axes, which provide the best angle for viewing and analysing information, so that the differences between observations can be better seen.

3.5. Paired Samples T Test

The Paired Samples t Test compares two meanings which come from the same person , object or unit. Both can be like: The two newspapers

- A two-time assessment (for example pre-testing and post-testing with a two-term intervention)
- A test under two separate conditions (e.g., a test under a condition of "regulation" and a condition of "experiment");
- measurements of the subject's or experimental units' two halves or sides (e.g. measurement of hearing loss on the left and right ears of a subject).

The aim of the test is to assess if the mean difference between pairing observations of a specific result is substantially different than zero from statistical proof. The Parametric Examination of Samples is a parametric test. Also named is this test:

- Test based.
- Check pairin
- Check repeated behaviour

The variable used in this test is known as the Contingent or continuous test variable which is twice or for two similar units or conditions. The t-test sample is the statistical process used to assess the average difference between two sets of observations, also known as the t-test based sample. Each subject or object is assessed twice in a paired sample t-test, resulting in couples of observations. Popular applications of the paired t-test sample involve case-control studies or designs of repeated measures. Suppose you want to determine the efficiency of a training programme for a corporation. One technique that you might recommend is to determine the output of an employee sample before and after the programme completion and to evaluate the discrepancies using a paired t-test sample.

IV ANALYSIS

The fig 2 shows the non-monetary impacts, which is also provided positive impact to enhance the profit of an organization.

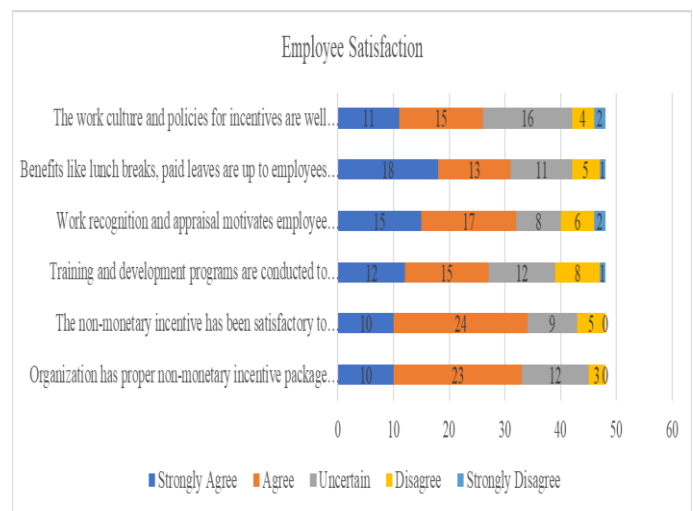


Fig 1: Employee Satisfaction

V CONCLUSION

The present research conducted an empirical analysis to evaluate various monetary and non-monetary incentives to enhance the organization outcome in terms of Competitive Edge, Productivity and customer Satisfaction. The overall analysis was conducted using IBM SPSS Statistics tool. The analysis conducted correlation analysis and paired sample t

test. In this paper we highlighted the solution for hypothesis such as both monetary and non-monetary incentives are beneficial to encourage an employee. These incentives have boosted the retention, engagement and satisfaction irrelevant to their position. The lower position employees like daily wagers and technician are interested to get monetary incentive, whereas the higher position employees like mid-manager and manager interested in non-monetary incentive in terms of promotion or other perks. But the mid-level staff like engineers in this analysis interested in non-monetary but their pay scale was not satisfactory so they interested in both the schemes. The overall incentive schemes have helped a lot to enhance the growth of organization. Thus, incentive system in this private organization should recommend satisfying both employee as well as employer.

REFERENCES.

1. Ashraf, N., &Bandiera, O. (2018). Social incentives in organizations. *Annual Review of Economics*, 10, 439-463.
2. Bakar, N. F. N. A., Kamil, B. A. M., Hamid, S. N. A., &Abd Rani, S. H. (2017). Non-Monetary Incentives to Improve Job Performance at Property Company in Penang Malaysia. *Journal of Business and Social Review in Emerging Economies*, 3(2), 245-252.
3. Burhop, C., & Lubbers, T. (2010). Incentives and innovation? R&D management in Germany's chemical and electrical engineering industries around 1900. *Explorations in Economic History*, 47(1), 100-111.
4. Cainarca, G. C., Delfino, F., & Ponta, L. (2019). The effect of monetary incentives on individual and organizational performance in an Italian Public Institution. *Administrative sciences*, 9(3), 72.
5. Cassar, L., & Meier, S. (2018). Nonmonetary Incentives and the Implications of Work as a Source of Meaning. *Journal of Economic Perspectives*, 32(3), 215-38.
6. Grynko, T., Krupskiy, O. P., Koshevyi, M., &Maximchuk, O. (2017). Modern concepts of financial and non-financial motivation of Service Industries Staff.
7. Ikäheimo, S., Kallunki, J. P., Moilanen, S., &Schiehll, E. (2018). Do white-collar employee incentives improve firm profitability?. *Journal of Management Accounting Research*, 30(3), 95-115.
8. Jyothi, J. (2016). Non-Monetary Benefits & Its Effectiveness in Motivating Employees. *Clear International Journal of Research in Commerce & Management*, 7(5).
9. Khan, A. A., & Roy, I. (2019). Employees Turnover: Perceived Impact on Organizational Performance in the Private Banking Sector. *IOSR Journal of Business and Management*. 21(12): 35-42.
10. Merriman, K. K., Sen, S., Felo, A. J., &Litzky, B. E. (2016). Employees and sustainability: the role of incentives. *Journal of Managerial Psychology*.
11. Nnubia, A. L. (2020). Monetary Incentives and Employee Performance of Manufacturing Firms in Anambra State. *International Journal of Innovative Finance and Economics Research* 8(1): 10-22.
12. Noor, W. S. W. M., Fareed, M., & Isa, M. F. M. (2018). Examining cultural orientation and reward management practices in Malaysian private organizations. *Polish Journal of Management Studies*, 18.
13. Pai, M. K. (2016). Firms' strategies, vertical integration, and productivity growth in Korea's core growth-leading industries. *Journal of the Asia Pacific Economy*, 21(4), 628-650.
14. Ponta, L., Delfino, F., &Cainarca, G. C. (2020). The role of monetary incentives: bonus and/or stimulus. *Administrative sciences*, 10(1), 8.
15. Ramirez, C. (2017). Three essays on non-monetary incentives and employee compensation. *UCLA Electronic Theses and Dissertations*.
16. Saluja, R., Soni, R., &Vardia, S. (2018). Online & Offline Consumer Buying Behavior (With reference to Udaipur City). *Pacific Business Review International*, 10(10), 74-83.
17. Selinske, M. J., Cooke, B., Torabi, N., Hardy, M. J., Knight, A. T., &Bekessy, S. A. (2017). Locating financial incentives among diverse motivations for long-term private land conservation. *Ecology and Society*, 22(2).
18. Whitford, A. B. (2018). Incentives and tournaments in public organizations. *Perspectives on Public Management and Governance*, 1(3), 177-194.
19. Yasué, M., & Kirkpatrick, J. B. (2020). Do financial incentives motivate conservation on private land?. *Oryx*, 54(4), 499-510.