

A Critical Analysis of Factors Affecting Attrition in Cement Industry of North-East India

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Abstract—Employee attrition has recently emerged as a vital issue for human resource management across the industry verticals in India. The existing corporate employee engagement programs succeeded in establishing various factors influencing attrition rate. But, it was discovered that there are some more fundamental factors which influences attrition rate substantially. These factors need attention for analyzing their importance and impact on the attrition rate of employees. Past studies concluded with various retention strategies in the corporate workplace, but the study on factors influencing the attrition got neglected significantly in the country and especially in the industries of North-Eastern Region of India. These factors with respect to attrition and retention have drawn considerable interest among researchers during the last couple of decades. Therefore, this research paper aims to critically examine the factors responsible for attrition of the employees at all levels of hierarchy in the North-East Cement Industry with special reference to Green Valliey Industries Limited. In addition, the research paper tries to understand the impact of job satisfaction of the employees on attrition.

Extensive literature was reviewed to discover the factors responsible for attrition among the employees. Questionnaires were prepared for collecting the primary data and various Industry reports were used as secondary data sources for analysis in the study.

Keywords: Attrition, Attrition Rate, Retention, Retention Models, HRM, Cement Industry.

1. INTRODUCTION

Attrition in a work environment refers to a reduction or decrease in the size or strength of the work force, or a gradual reduction in labor occurring through means other than firing employees. In broader sense, attrition is a situation which an employer faces when employee leave the organization due to job dissatisfaction, new opportunity in the market, retirement and natural cause (death/illness). Employee attrition is one of the critical problems which are faced by an HR manager today. In an ideal situation an employee considers multiple comfort level while working in an office e.g. employer's goodwill in the market, remuneration structure, future growth scopes, working conditions, co-workers, current role's scope in

the market and most importantly, future stability with the organization. Others may experience lack of freedom or autonomy they require to perform at expected levels, or employees may move or retire, take another job, be ill-suited to the position they were hired for etc. The list can be endless but the reason why employees leave the organization varies according to the nature of the businesses. Therefore, it's very challenging task for an HR expert to cope up with this situation and retain talent with the organization.

1.1 Types of Attrition

Broadly attrition is classified as avoidable and unavoidable. Avoidable is when the company loses employees who are having shown the desired levels of performance or who have the potential to demonstrate the skills to excel in the assigned tasks. Retaining such employees is of prime importance for the organization and the employee engagement policies mostly are framed to retain such employee. Unavoidable attrition is a situation when say a female employee's husband is transferred to a new city and hence she too needs to quit from her role to be with her family. Such drop outs cannot be avoided by the organization in most cases.

1.2 Associated Cost with High Attrition

a. Talent loss

It includes the cost of lost knowledge, skills and contacts that the employee who is leaving is taking with them out of organization's door.

b. Recruitment cost

It includes the advertisement costs, agency costs, employee referral costs, internet posting costs.

c. Training cost

It includes the cost of orientation and training programs.

d. Motivational cost

It refers to the cost arises because of motivating the employees to retain in the organization in terms of increasing their financial or non-financial benefits.

e. Lost Productivity Costs

As, new employee take some time in learning the new job, the company policies and practices, etc. they are not fully productive for that very time period.

In the present global competitive scenario as there is no dearth of opportunities for talented persons, employees are prone to move from one organization to another. Corporates are facing the problem of attrition at this time of economic revival.

1.3 Impact of Attrition on Organizations

The business environment today is so competitive that the impact of attrition on an organization can be detrimental as it may lead to loss of employee. While losing employees that are poor performers or negative influences on workplace morale can have positive effects, unplanned and frequent employee turnover is generally regarded as bad for business. High turnover rates typically mean companies are doing a poor job selecting the right employees, failing to provide a motivating work environment or losing out to employers that offer better pay and benefits.

Staff turnover can also have a negative impact on other employees by disrupting group socialization processes and increasing internal conflict, which can lead to triggering additional absenteeism.

1.4 Role of HR

Human resource is considered to be the backbone of any organization. Human Resource Management is a process, which consists of four main activities, namely, acquisition, development, motivation, and maintenance of human resources. It is the key to the whole organization and related to all other activities of the management i.e., marketing, production, finance etc.

Human Resource Management is concerned with managing people as organizational resources rather than as factors of production. It involves a system to be followed in business firm to recruit, select, hire, train and develop human assets. It is concerned with the people dimension of an organization. The attainment of organizational objectives depends, to a great extent, on the way in which people are recruited, developed and utilized by the management. Therefore, proper coordination of human efforts and effective utilization of human and others material resources is necessary.

Therefore, HR Department has the most crucial role to play in any organization. At the time of conducting interviews, the HR personnel try to bring right candidate to the right job. Similar is true even when the attrition rate is abnormal, so they have a very crucial role to play.

1.5 Overview of the North East Cement Industry

The North Eastern Region of India stretches from the foothills of the Himalayas in the eastern range and is surrounded by Bangladesh, Bhutan, China, Nepal and Myanmar. The region

is rich in natural resources, covered with dense forests, has the highest rainfall in the country, with large and small river systems nesting the land. However, NER so rich with natural resources has not been able to catch up with the pace of development which has taken place in rest of India.

North-East has around a dozen large cement companies operating and looking for new market outside region. The cement industry of North-East is one of the fastest growing markets in India. Cement companies operating in North-East India enjoy concession and tax reliefs under North-East Industrial Investment Promotion Policy 2007 (NEIIPP). To make their operation viable Cement Industries are armed with transport subsidy. The cement market of North-East is now approximately 5.2 Million Ton per annum and expected to grow at a very fast pace due to huge infrastructure development, increasing housing projects etc. This facilitates the cement demand to grow in the near future and will also raise opportunity in the region. Following the increasing demand and growth opportunities in the region, various cement companies from rest of the India are eyeing to enter North-East. In addition to this the cement companies of North-East India are now eyeing the growing market of North Bengal and Bihar too for expansion. With entry into these new territories the cement companies show it is gradually growing in the NER^[3].

2. LITERATURE REVIEW

“Employee Attrition and Retention: Exploring Dimensions in the urban centric BPO” by Santoshi Sengupta discusses that several personal and job characteristics are responsible for attrition. These job characteristics may be either positive or negative. The outcomes of these are satisfaction, motivation, involvement, life interest and work compatibility. Factors like employee motivation, employee involvement etc., are a major dimension for retention. To attain the aim of the research, the Hackman and Oldham’s Job Characteristics model (1976) was taken as the basic foundation. Hackman & Oldham (1976) proposed the Job Characteristics Model, which is widely used as a framework to study how particular job characteristics impact on job outcomes, including job satisfaction^[4]. “Human Resource Management Practices in Cement Industries : A Case- Study of India Cements Limited” by K. Krishna Kumar emphasizes on the various Human Resource processes that lead to the satisfaction level of the respondents regarding the HR practices in the company. Physical, behavioural and psychological differences among individuals have increased with rapid changes taking place in the management process of the organization. This paper states that these factors also are a major contributor to the factors affecting the attrition in a particular organization. An employee-employer relationship and welfare measure also affects attrition^[5].

“An analysis of Attrition: Retention Strategy for IT/BPO industry” by Vibha Gupta, distributes the factors responsible for attrition by four major factors. Factor A as “Better

remuneration and career prospects”, factor B as “Perceptions of training and resources”, and factor C relating to “Shift timings and week offs” and factor D as “Organizational culture”. The objective of the study includes examination of the causes of the high attrition rate among officers/agents in the IT/BPO sector and the analysis of the factors affecting Attrition in IT & BPO sector ^[6].

“Attrition Rate- the Role of HR Department” by Pradeep Shukla and Manoj Sharma, explores the various dimensions of attrition. First part of the paper discusses the qualitative factors. Dimensions defined were dispirited perceptual factors, unfavorable working conditions, hostile organizational culture, discontented personal factors, substandard nature of job etc. The second part revealed that employees from different bands of age, marital status, gender, tenure or education leave the organization. Regression analysis is done in order to find out the contribution of these factors to the stay of an employee ^[7].

“A Study on Effective Employee Retention Strategies” by R. Mahalakshmi Ch. Bala Nageswara Rao discusses that Effective employee retention is a systematic effort by employers to create and foster an environment that encourages current employees to remain employed by having policies and practices in place that address their diverse needs. A strong retention strategy becomes a powerful recruitment tool. The paper discusses the 3 R’s of employee retention as reward, recognition and respect and also discusses the Kei’s employee retention wheel ^[8].

3. RESEARCH METHODOLOGY

3.1 Data Source

Primary Data – Primary data source were employees from various departments of the company under study.

Secondary Data – Secondary data sources were exhaustive literature survey, books, reports and articles published.

3.2 Data collection method and Research Instrument

Primary data has been collected through structured questionnaires from the employees and through personal interactions.

3.3 Sampling Technique

Determination of Sample-Size

The size of sample (n) is computed on the basis of precision rate (e) and confidence level (α). (Kothari, C.R., 2004).

The formula for the size of the sample is given in case of finite population with total number (N). The sample size (n) is given by:

$$n = \frac{Z^2 \times p \times q \times N}{e^2 \times (N-1) + Z^2 \times p \times q} \text{-----(I)}$$

where,

- i) p = 0.50, is the proportion of required variate in population and its expected probability.
- ii) q = 1- p = 0.5, Proportion of the negation of that variate.
- iii) Z= $Z_{\alpha/2}$ = 1.6445, The critical value of Z under standard normal curve at 90% level of significance
α = 10%, α/2 = 5 %, level Two tail Test
- iv) e = 0.048 = 4.8 % Error of precision in the result this error will not be more than 5% (e < 5%).
- v) N = 546 Total finite population size (only office workers). Then the size of sample (n) is worked out as,

n = 91.27

n = 92 (approximately)

Sampling Type – Purposive Sampling

Parameters of Data Analysis: The responses of employees has been measured on the basis of following parameters –

- a) Problem of attrition and its intensity
- b) Causes of attrition and their relative importance
- c) Strategies for tackling attrition
- d) Strategies for employee retention

3.4 Data Analysis

A qualitative analysis of the data collected has been done and the findings are shown with the help of appropriate tables, figures and models.

4. DATE ANALYSIS AND INTERPRETATION

The various factors found to be affecting attrition primarily from the literature survey undertaken can be categorized as follows:

Table 1

A) PERSONAL FACTORS
Location
Personal & Family Priorities
Stress
Emotional Quotient
Gender Discrimination
Physical and Mental Harassment
Undisclosed
B) FACTORS INFLUENCING JOB
Nature of Job
Job security
Job status
Quantum of job
Working Hours
Rest Intervals
Other Facilities

C) COMPANY ENVIRONMENT AND WORKING CONDITIONS
Your feeling as an employee
Interpersonal Relationship with superiors
Interpersonal Relations with Co-workers
Interpersonal Relation with Sub-ordinates
Autonomy in execution of the work
Work place Atmosphere
D) EMPLOYEE BENEFITS AND WELFARE MEASURES
Wage & Salary
Transfer Policies and Promotional Policies
Medical and Insurance facilities
Housing and Recreational facilities
Provident Fund and Gratuity schemes
Children Education Allowances
Leave and Leave travel Compensation (LTC) rules
Training and Counselling Programmes
Safety measures

Identification of the extent of impact of the factors on attrition:

Major factors:

Table 2

SL.NO.	ATTRIBUTES	CORRELATION
1	PERSONAL FACTORS	0.837
2	FACTORS INFLUENCING JOB	0.574
3	COMPANY ENVIRONMENT AND WORKING CONDITIONS	0.347
4	EMPLOYEE BENEFITS AND WELFARE MEASURES	0.679

Interpretation

The above TABLE shows that PERSONAL FACTORS records the highest correlation value with 0.837. This implies that among all the major factors affecting attrition identified, personal factors plays an important role in affecting the same, as suggested by the employees of the organization. It is highly correlated with attrition, followed by the employee benefits and welfare measures, factors influencing job and company environment and working conditions. This is due to the fact that an employee prefers personal factors more than any other factor primarily, which if unsatisfied will not lead to an increase in the job satisfaction for him.

Personal factors

Table 3

SL.NO.	PERSONAL FACTORS	CORRELATION
1	Location	0.777
2	Personal & Family Priorities	0.965
3	Stress	0.427
4	Gender Discrimination	0.098
5	Physical and Mental Harassment	0.132
6	Undisclosed	0.362

Interpretation

The above table shows that among the personal factors identified, PERSONAL AND FAMILY PRIORITIES is highly correlated with attrition. Second factor that affects attrition is the location. This is due to the belief existing among the employees that one’s job is for the family. The family obligations are to be met so that he can maintain a good work-life balance, leading to more productivity both at work and in family.

Factors influencing job

Table 4

SL.NO.	FACTORS INFLUENCING JOB	CORRELATION
1	Nature of Job	1
2	Job security	0.292
3	Job status	0.338
4	Quantum of job	0.291
5	Working Hours	0.291
6	Rest Intervals	0.126
7	Other Facilities	0.244

Interpretation

The above table indicates that nature of job is highly correlated to attrition. This is due to the fact that the nature of job should match with the skills that the employee possesses. If there is a mismatch of the skills possessed by him and the nature of the work he is assigned to perform, it will lead to job dissatisfaction. In this situation, an employee getting a job offer from other organizations that matches his skills will lead to attrition.

Company environment and working conditions

Table 5

SL.NO.	COMPANY ENVIRONMENT AND WORKING CONDITIONS	CORRELATION
1	Your feeling as an employee	0.101
2	Interpersonal Relationship with superiors	0.682
3	Interpersonal Relations with Co-workers	0.998
4	Interpersonal Relation with Sub-ordinates	0.866
5	Autonomy in execution of the work	0.836
6	Work place Atmosphere	0.924

Interpretation

The above table shows that the factor mostly affecting attrition among the main head of company environment and working conditions is INTERPERSONAL RELATIONSHIP WITH CO-WORKERS. Second factor comes to be the work place atmosphere. This is due to the fact that if good interpersonal relations are maintained with the co-workers, a good and congenial atmosphere is maintained in the workplace, because the worker spends most of his time with his co-workers in the office and good relations add up to his productivity and satisfaction leading to lower attrition.

Employee benefits and welfare measures

Table 6

SL.NO.	EMPLOYEE BENEFITS AND WELFARE MEASURES	CORRELATION
1	Wage & Salary	0.948
2	Transfer Policies and Promotional Policies	0.211
3	Medical and Insurance facilities	0.844
4	Housing and Recreational facilities	0.696
5	Provident Fund and Gratuity schemes	0.057
6	Children Education Allowances	0.139
7	Leave and Leave travel Compensation (LTC) rules	0.139
8	Training and Counseling Programmes	0.096
9	Safety measures	0.051

Interpretation

The above table shows that among the factors considered for the employee benefits and welfare measures, WAGE AND SALARY is the main factor responsible for attrition. The wage and salary administration is the major factor influencing an individual to take up or leave a job. Any organization offering a higher package with the same or a little more workload and satisfying all the other conditions, will influence an individual to leave a job.

Various retention strategies used by the organization

Table 7

SL.NO.	RETENTION STRATEGIES USED	CORRELATION
1	COMPETITIVE PACKAGE	0.107
2	CONTESTS AND INCENTIVES	0.282
3	STAY INTERVIEWS	0.848
4	EMPLOYEE DEVELOPMENT	0.866
5	EMPLOYEES KNOW WHAT IS EXPECTED	0.119
6	PROMOTIONS AND TRANSFER	0.597
7	TRAINING AND COUNSELING	0.838

Interpretation

The above table shows that EMPLOYEE DEVELOPMENT, TRAINING AND COUNSELING and STAY INTERVIEWS are the major retention strategies used by the company.

TO TEST IF THE RETENTION STRATEGIES USED AS PER SURVEY, ACTUALLY HAS ANY IMPACT ON THE REDUCTION OF ATTRITION OR NOT

H_0 = The retention strategy found as per survey has a positive effect on the reduction of attrition.

H_1 = The retention strategy found as per survey does not have a positive effect on the reduction of attrition.

Table 8

SL.NO.	RETENTION STRATEGIES USED	T VALUE
1	COMPETITIVE PACKAGE	0.285
2	CONTESTS AND INCENTIVES	0.107
3	STAY INTERVIEWS	0.028
4	EMPLOYEE DEVELOPMENT	0.004
5	EMPLOYEES KNOW WHAT IS EXPECTED	0.317
6	PROMOTIONS AND TRANSFER	0.091
7	TRAINING AND COUNSELING	0.028

According to the t- test results, the level of significance for the factors, i.e., EMPLOYEE DEVELOPMENT, TRAINING AND COUNSELING and STAY INTERVIEWS are found to be below 0.05, which implies the H_0 is accepted. This means that the results as per the survey are true and those factors have a positive influence on the reduction of attrition.

Therefore, the result from t-test coincides with that of the survey.

Calculation of attrition rate

Table 9

Year (Financial year)	Attrition Rate(%)
2009-10	1.46
2010-11	1.39
2011-12	0.84
2012-13	1.279
2013-14	1.428
2014-15	1.738

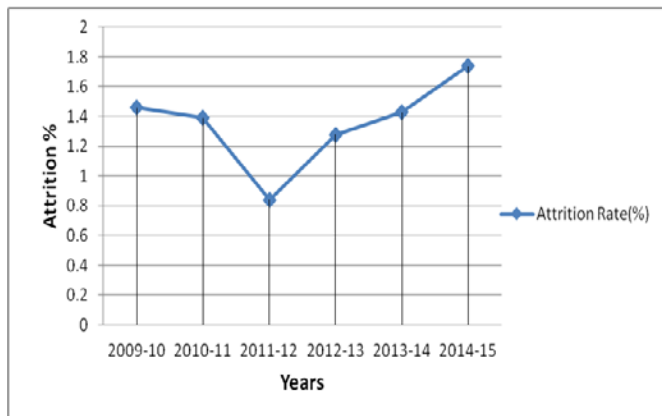


Fig. 1

Interpretation

The above graph shows that the attrition rate is on an increase presently, according to the data available. The reason for this may be the ineffective management of the above identified factors that leads to the dissatisfaction of the employees and thus leads to attrition.

5. DISCUSSIONS AND FINDINGS

1. After careful literature survey, thirty-six factors are identified under four major heads which has a direct or indirect impact on attrition.
2. Among all other factors, personal factors majorly affects attrition rate.
3. Among the six personal factors, personal and family priorities are given more importance by the employees in choosing to take up a job among various alternatives.
4. Location ranks second in the preference list among the personal factors by the employees.
5. Nature of the job is given priority among the seven factors influencing job.
6. Interpersonal relationship with co-workers and the work place atmosphere adds up to the primary factors affecting attrition due to the company environment and working conditions.

7. Among the employee benefits and welfare measures, wage and salary is given the most priority by the employees.
8. It is found that employee development, training and counseling and stay interviews are mostly used by the organization as a retention strategy.
9. This finding is tested by t-test to test the null hypothesis that if the retention strategy found as per survey has a positive effect on the reduction of attrition and the null hypothesis is accepted as per the test.
10. The attrition rate is on an increase and presently it is rated to be 1.738%

6. SUGGESTIONS

1. After analyzing the results of the survey, it is seen that the personal factors are a major factor responsible for attrition. But, this has not been given the preference or due importance in most of the theories and studies undertaken so far.
2. The improved and employees oriented Retention key-factors should be used to manage the best Retention of Labors suffering.
3. It is suggested that specific aspects like freedom in working hours, opportunity to express innovative ideas, employee's representation in management, accommodation facilities, facility of indoor games and recreation, attractive pay scales, motivation from management, should be considered while framing the HR policies and attract potential candidates and their satisfaction.
4. It is also suggested that along with present ways like training, incentives, overtime, package and free accommodation; new ways like socio-economic measures should be adopted.
5. Various models for attrition and retention are studied and a new dimension is added in the existing model in order to develop a new model.

7. CONCLUSIONS

The term "employee turnover" is an important metric that is often central to organizations' workforce planning and strategy making. It has been found that the reasons provoking an employee to leave their current positions can be discussed and focused to develop more effective retention strategies. Designing an effective retention strategy has become a challenging task for the HR managers today of the organizations. This will help in future retention rates among current staff, job satisfaction among employees, improved employee engagement programs and an organization's ability to attract talented people for job vacancies. The research undertaken identifies some of the factors that has an crucial impact on attrition and recommends that these factors to be included while developing any employee engagement programs and retention policies.

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