MODEL DEVELOPMENT FOR EMPLOYEE RETENTION IN INDIAN CONSTRUCTION INDUSTRY USING STRUCTURAL EQUATION MODELING (SEM)

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ABSTRACT

In India, number of construction companies is increasing day by day so the demand for the efficient employees is also increasing, but there are lots of dissatisfaction is observed among the employees of construction companies in India which causes increasing rate of employee attrition.

Employees of construction industry can be satisfied by motivating them with financial and non-financial encouragements. In this paper, factors affecting employee retention in the construction industry were identified and assessed. The views of 287 employees were collected by the help of structure questionnaires distributed to Architects, Civil Engineers, Builders, Surveyors, Clerks and others from selected construction companies in India. Basic facilities, working environment, scope & opportunities and employee satisfaction were found as the major factors affecting employee retention. To analyze the impact of those factors on the employee retentions, Structural Equation Modeling (SEM) through AMOS Software has been used here. The study shows that all identified factors have significant relationship with the employee retention.

Keywords: Employee Retention; Employee Attrition; Indian Construction Industry, Structural Equation Modelling.

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1. INTRODUCTION

Activities of construction companies are increasing gradually because of industrialization and urbanization due to increasing population and changing lifestyle. The construction industry depends on huge number of employees for executing all activities because these activities cannot be fully carried out through automation. Therefore employee retention is important for this industry (Ojelabi et al., 2018). Employees are satisfied if their needs (basic facilities and nonfinancial incentives) are fulfilled properly in the organization. Thus employees retain despite the attraction of a good offers from other organization (Ngonde, 2015). Employee satisfaction upholds loyalty and commitment towards the organization. It has a positive relationship with employee retention (Danso, 2012). The attrition of the employee in construction companies depends on several factors including interpersonal relationship, competitive salary, challenging work, job security, work autonomy, workload and flexibility.

2. REVIEW OF LITERATURE

Basic facility is one of the most important factors for employee retention. It focuses on the variables like salary, job security, etc. that influence employee satisfaction (Amin et al., 2015). These variables are related with financial and non-financial incentives that influence employee retention. The job security is also important factor of retention as secured employee is having high satisfaction towards organization which leads to develop low attrition. The infrastructure is playing always a positive role in the process of retention of the employee (Blair & Jordan, 1994 & Mubatsi, 2012). Adequate infrastructure is required always (Anifowose & Lawal, 2013). An improper infrastructure facility is creating unnecessary stress especially in case of rush hour which ultimately effects on the job satisfaction. According to a study, 64 % of employees are satisfied due to infrastructure. Properly managed infrastructure is able to flourish the business (IFMA, 2001). The working environment in the construction companies has direct influence on the performance of the employees. Stressful working condition is lowering the performance of the employees (George & Jones, 1999). Good working environment enhances the level of satisfaction of the employees (Kasule, 2015). The positive working environment produces the sense of belongingness among the employee (Miller, et al., 2001). The working environment has the direct influence on the attritions (Ng'ethe, et. al., 2012). Working environment is depending on some variables like communication, workload distribution, leadership quality, motivation from colleagues etc. and promotes intense employee engagement in the organization. Many employees are dissatisfied due to excessive work pressure (Zainudin, et. al., 2010). Stressful working condition also hampers the work life balance. The relationship among the employees is also an important aspect of the working environment. The attrition is directly and highly correlated with the relation among the employees. The leadership quality is playing a pivotal role in the employee attrition. Proper supervision or the good leadership quality is able to reduce the stress of the employee and earn the commitment from them (Landsman, 2008 & Heish, 2012). Scopes and opportunities is one of the important factors because every employee wants that organization where ample of opportunities of career improvements exist. Provision for the development and the training in the organization is able

to create a positive mentality among the employee that the employer is caring about their development which ultimately draws attraction towards the organization (Huselid, 1995 & Dockel, 2003), because the talented or the skilled workers have ample of job opportunities and it is the organization who is supposed to attract and retain them. Autonomy is an important issue as it provides opportunity to take decision regarding work by the employee (Metcalf, et al., 2005 & Strauss, 2006) and the employee participation has direct influence on the employee retention (Bhatti, et al., 2011). Recognition and the opportunity for the promotion are other good characteristics of organization that are looking for the improvement of the employee. Reward system is a kind of promotional activities and it is a positive step as it recognizes the employee's performance.

3. HYPOTHESES DEVELOPMENT

H1: 'Basic Facilities' positively influences 'Employee Satisfaction' in Construction Industry.

H2: 'Working Environment' positively influences 'Employee Satisfaction' in Construction Industry.

H3: 'Scope & Opportunity' positively influences 'Employee Satisfaction' in Construction Industry.

H4: 'Employee Satisfaction' positively influences 'Employee Retention' in Construction Industry.

Figure 1 Hypothesized Research Model Establishment

4. RESEARCH METHODOLOGY

In this study, research model (Figure 1) has been established by the help of primary as well as secondary data. A structured questionnaire was set for executing a research survey. This questionnaire is directly connected with different factors and variables collected from secondary research. Here, 5 point Likert type scale is used for measuring the reactions of the employees of construction companies in India. Two stage sampling technique is used in this study. Construction companies and related organizations (Private and Government companies, Tertiary companies, Consulting firms, Contracting firms) in India were chosen through convenience sampling technique in the first stage and sample elements under six different categories with 50 elements each (Civil Engineers, Architects, Builders, Surveyors, Clerks and Others) were chosen randomly from those companies in the second stage. 287 responses out of 300 employees were finally collected for this research. The survey period was from 15th December, 2018 to 15th February, 2019.

4.1. Respondents Characteristics

Male						Female					
Civil Engineers	Architects	Builders	Surveyors	Clar ks	Othe rs	Civil Engineers	Architects	Builders	Surveyors	Clar ks	Othe rs
35	31	26	24	21	37	24	19	18	15	17	20

5. ANALYSIS AND RESULTS

For establishing the research model and judging the hypothesis, Structural equation modeling (SEM) by the help of AMOS software has been used in this research. Here, model fitness indexes were tested through structural model. Different factors have been extracted in this study by Exploratory Factor Analysis (EFA) through SPSS which proves the validity of the questionnaire.

Table 1 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.724
Bartlett's Test of Sphericity	Approx. Chi-Square	4537.799
	Df	153
	Sig.	<0.001

In this study, KMO and Bartlett's Test (Table 1) indicates the aptness of using exploratory factor analysis (EFA).

Table 2 Overall Reliability Statistics

Cronbach's Alpha	No. of Items
0.768	18

The overall Cronbach alpha is 0.894 which is greater than 0.70 (Table 2), indicates the suitable range of reliability of collected data. Variables which are associated with 'factor loadings' having more than 0.5 have created 5 factors as mentioned below (Table 3) in Rotated Component Matrix. Total 89.541 % of the variations can be explained here by those extracted factors.

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Table 3 Result of factor analysis - Rotated Component Matrix

Variables	Component				
	Basic Facilities	Scope & Opportunity	Working Environment	Employee Retention	Employee Satisfaction
q8	.954	.060	.082	.098	.203
q6	.950	.071	.058	.129	.208
q5	.950	.068	.089	.131	.197
q7	.949	.045	.093	.151	.196
q10	.031	.945	.021	.007	.099
q12	.060	.911	.045	.020	.137
q11	.017	.900	.033	.098	.040
q9	.104	.846	-.021	.047	.091
q1	.057	.028	.911	.086	.113
q4	.081	.028	.905	.048	.116
q3	.093	-.022	.876	.065	.127
q2	.051	.039	.868	.064	.007
q18	.116	.138	.080	.947	.151
q16	.168	.015	.093	.946	.235
q17	.168	.015	.093	.946	.235
q15	.263	.181	.100	.199	.854
q13	.319	.175	.166	.267	.849
q14	.303	.091	.174	.286	.823
% of Variance Explained	22.152	18.663	18.284	16.538	13.904
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.					
Rotation converged in 5 iterations.					

All indices of Structural model (Table 4) prove the fitness of the research model. Path Analysis was executed for checking the impact of different factors on Employee Satisfaction and Retention in Indian construction companies.

Table 4 Fit indices of Confirmatory Factor Analysis for Structural Model

Fit Index	Acceptable Threshold Levels	Structural Model Values
χ^2/df (Chi-square / degree of freedom)	Values less than 3	0.719
RMSEA (Root mean-square error of approximation)	Values less than 0.06	0.001
GFI (Goodness of fit index)	Values greater than 0.90	0.998
AGFI (Adjusted goodness of fit index)	Values greater than 0.90	0.985
NFI (Normed fit index)	Values greater than 0.90	0.997
CFI (Comparative fit index)	Values greater than 0.90	0.999

Figure 2 Outcome of hypothesized structural model

Table 5 Path analysis of Structural Model

Measurement Path			Hypothesis	Estimate	S.E.	C.R.	P-Value	Assessment
Employee Satisfaction	←	Basic Facilities	H1	.499	.038	13.217	.001*	Supported
Employee Satisfaction	←	Working Environment	H2	.315	.040	7.841	.001*	Supported
Employee Satisfaction	←	Scope Opportunity	H3	.286	.039	7.334	.004*	Supported
Employee Retention	←	Employee Satisfaction	H4	.795	.080	9.920	.001*	Supported

Note: * indicates 1% level of significance

5.1. Path Analysis for Hypothesis Testing (Table 5 & Figure 2)

H1: ‘Basic Facilities’ positively influences ‘Employee Satisfaction’ in Construction Industry.

Structural model supports this hypothesis because of significant path coefficient ($p < 0.01$) and expected positive sign (+.499). Proper salary structure, job security, recognition, etc. can create a positive impact on employee satisfaction. Proper infrastructure makes easier many difficult jobs, if most of the energy and time is wasted due to improper availability of the infrastructure then it is become frustrating situation among employees which leads to develop dissatisfaction (Iyabo, 2013).

H2: ‘Working Environment’ positively influences ‘Employee Satisfaction’ in Construction Industry.

Structural model supports this hypothesis because of significant path coefficient ($p < 0.01$) and expected positive sign (+.315). A positive working environment ensures many things such as communication, leadership, workload distribution, motivation from colleagues etc. (Richards, et al., 1994). Employees are always looking for those construction companies where these characteristics are found.

H3: ‘Scope & Opportunity’ positively influences ‘Employee Satisfaction’ in Construction Industry.

Significant P-value ($p < 0.01$) with positive (+.286) path co-efficient supports the hypothesis. The employees are always seeking for their own career development (Hiltrop, 1999) for that reasons those organizations which are giving full autonomy and recognition to the employee

and have plenty of training & development opportunity, which is able to gather loyalty among the employees.

H4: 'Employee Satisfaction' positively influences 'Employee Retention' in Construction Industry.

Significant P-value ($p < 0.01$) with positive (+.795) path co-efficient supports the hypothesis. It should be taken seriously that an efficient employee is having ample amount of job opportunity so if any organization ignores their employee satisfaction, then the organization will never retain their employee.

6. IMPLICATION OF THE STUDY

The study helps to understand the factors affecting the employee satisfaction and retention in construction industry in India. The employee retention is directly associated with the employee satisfaction. Any construction company is not able to retain their employees if they ignore some issues i.e. basic facilities, working environment and scopes and opportunities. The study reveals that the employees are more concerned with the basic facilities of the construction company. Basic facilities have higher impact on the employee satisfaction. Working environment and scope & opportunities have moderate but positive correlation with the employee satisfaction in construction companies in India. The employees are the most important factors to uplift the brand name of the organization because it ensures the continuous improvement of the sector. This research paper helps to understand the key areas which are needed to be improved by construction industry to retain their good employees which in return ensure the organizational development.

7. CONCLUSION

Every employee in construction companies is important. If organization is failed to retain their employees then the organization will never be able to sustain in the market place. To sustain and flourish in the market every construction company need to provide identified benefits which are demanded by the employees; also the organizations should engage themselves in continuous improvement process.

Annexure 1

Factors	Questions on different Variables
Basic Facilities	Good compensation structure helps to satisfy the employees in the organization.
	Availability of enough infrastructure helps to satisfy the employees in the organization.
	Job security helps to satisfy the employees in the organization.
	Availability of medical facilities helps to satisfy the employees in the organization.
Scope & Opportunity	Provision of autonomy in work helps to satisfy the employees in organization.
	Scope of promotion motivates employees to satisfy the employees in the organization.
	Opportunities of career development help to satisfy the employees in the organization.
	Opportunities of training and development help to satisfy the employees in the organization.
Working Environment	A good Communication with colleague, managements, subordinate and other stakeholders help to satisfy the employees in the organization.
	Proper workload distribution helps to satisfy the employees in the organization.
	Proper leadership and supervision help to satisfy the employees in the organization.
	Motivation from colleagues helps to satisfy the employees in the organization.
Employee Satisfaction	Basic facilities help to promote the employee satisfaction.
	Working environment helps to promote the employee satisfaction.
	Scopes and opportunities help to promote the employee satisfaction.

Factors	Questions on different Variables
Employee Retention	Good working environment helps to promote the employee retention.
	Career opportunities help to promote the employee retention.
	Proper basic facilities help to promote the employee retention.

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