

# Study on the Factors Affecting The Performance Of Labours in Indian Construction Industry

B.Vijay Antony Raj<sup>1</sup> and Mrs.P.S.Kothai<sup>2</sup>II Year M.E., (CEM), Department of Civil Engineering, Kongu Engineering College, Erode-638052, India<sup>1</sup>  
Associate Professor, Department of Civil Engineering, Kongu Engineering College, Erode-638052, India<sup>2</sup>

**ABSTRACT---**Human Resource Management or HRM is the process of managing people in a company/firm as well as managing the existing inter-personal relationships. These two processes are key in the success and growth of a business. Human resource management is the management process of an organization's workforce, or human resources. It is responsible for the attraction, selection, training, assessment, and rewarding of employees, while also overseeing organizational leadership and culture and ensuring compliance with employment and labor laws. HR now focuses on strategic initiatives like mergers and acquisitions, talent management, succession planning, industrial and labor relations, and diversity and inclusion.

In startup companies, HR's duties may be performed by trained professionals. In larger companies, an entire functional group is typically dedicated to the discipline, with staff specializing in various HR tasks and functional leadership engaging in strategic decision making across the business. The ultimate focus of HRM is the people within an organization. Regular planning, monitoring and evaluation are important for the success of HRM. Successful implementation ensures that all employees know their role, career path and also feel part of an organization which is able to manage and reconcile their expectations as well as those of the organization and its objectives. This project is done in identification of factors irrespective to labors.

Based on those factors a questionnaire has been prepared in labors point of view. In this thesis , questionnaire survey have been conducted with various companies among 75 labors and using SPSS software their response have been extracted for studying the impact of human resource management practices on productivity and financial performance in construction industry and appropriate solution was given for all impacts.

**Keywords:** Human resource management, Labors, Engineers, Entrepreneurs, Response, Analysis

## I INTRODUCTION

### 1.1. GENERAL

The process of attracting, developing and maintaining a talented and energetic workforce to support organisational mission, objectives and strategies is the ultimate aim of human resource management. HRM is the process of finding out what people want from their work, what an organization wants from its employees, and then matching these two sets of needs.

Purpose of this research is to improve management strategies, decrease the mismatch between required and available skilled labor and to discuss the consequences of ignoring the interests of craftsmen. Perhaps most important, the consultants can provide the supervisor and crew with the training that will yield the greatest productivity improvements. Productivity is a serious issue for the construction industry, which because of its large size has a dramatic impact on the economy. Productivity remains an intriguing subject and a dominant issue in the construction sector, promising cost savings and efficient usage of resources.

### 1.2 NEED FOR HUMAN RESOURCE MANAGEMENT

To improve the quality of human resource management practices.

- To decrease the total cost and duration of the project.
- To eliminate unnecessary labour cost involved in construction

### 1.3 OBJECTIVE

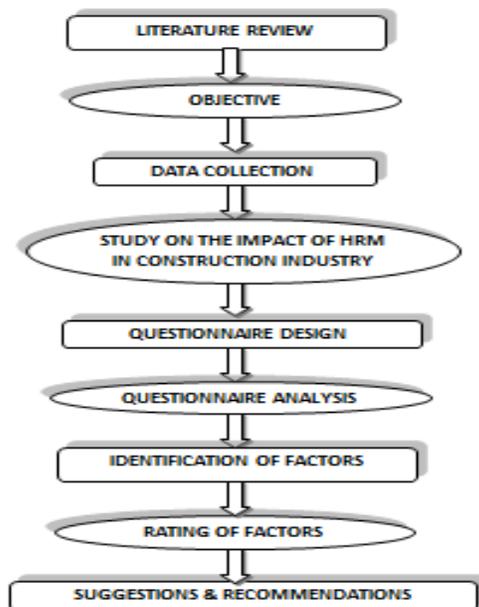
The main objective are

- To study the impact of human resource management among construction labours.

- To identify the current scenario followed in human resource management in Civil Engineering field.

## II RESEARCH METHODOLOGY

### 2.1 METHODOLOGY ADOPTED



### 2.2 FACTORS IDENTIFICATION

There are some factors which influence HRM at a greater level. These factors were identified based on personal analysis and literature study. Personal analyses of construction project managers were done.

### 2.3 FACTORS IRRESPECTIVE TO LABOURS

#### 2.3.1 PHYSICAL FACTORS

Site congestion factor will never enable the labor to do work in comfortable manner and over time work will not give good productivity in any job. In most of the cases design complexity will affect the speed of work.

#### 2.3.2 ECONOMIC FACTORS

On time payment should be done right at the time when the work is accomplished. Discontinuity of work schedule will affect labors financial status and sufficient amount of pay should be given to labor.

#### 2.3.3 PSYCHOLOGICAL FACTORS

Psychological factors deals will many parameters. In civil Engineering point of view ,In recent years the cultural difference is making the worker to work uncomfortably and work satisfaction with respect to job is very much necessary.

#### 2.3.4 ORGANIZATIONAL FACTORS

Quality of work is good/maintained in firm. Sufficient Crew size should be provided by the firm for accomplishing the task. Accommodation and food should be maintained in a better manner by the top manager.

#### 2.3.5 ENVIRONMENTAL FACTORS

It is very clear to mention that climatic condition will affect the working performance but the firm is the primarily responsible for resolving HVAC problems to labors. The project manager and the site supervisor should always maintain the site condition in a good manner.

#### 2.3.6 DESIGN FACTORS

Innovative design methodology creates discomfort in work but proper training approach will eradicate this problem. It is must to say that violation of code practices by the firm should be totally abolished only the design problems won't occur.

#### 2.3.7 MATERIAL FACTORS

It is necessary to supply quality materials by the firm at any cost but in some cases desolate materials are used in small scale firms. Another serious problem is the co-workers are mishandling the materials due to lack of training.

#### 2.3.8 EQUIPMENT FACTORS

Usage of mechanical equipment's for an prolonged period of time is still found in most of the firms and due to this factor equipment malfunctioning will take place oftenly.It is necessary to have proper maintenance of equipment and proper training for operating equipment's to the labor's.

#### 2.3.9 PROJECT FACTORS

Sufficient men and materials are not found in some working site due to this factor the time period for accomplishing a work is delayed. A good transportation facility should be provided by the firm to the labors.

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### 2.3.10 EXTERNAL FACTORS

Political / Governmental problems often aroused in some firms and due to this work schedule is disturbed. In small scale firms, resources are managed in an improper manner whereas in partnership based firms contractual conflicts are found.

## III. DATA COLLECTION AND ANALYSIS

### 3.1 GENERAL

Various data's have been collected for designing the questionnaire. A translated questionnaire in Tamil language has been prepared, for the labors for convenient purpose.

### 3.2 QUESTIONNAIRE DESIGN

The design of questionnaire was done based on the analysis made in various literatures reviews. The design of questionnaire was done based on the factors to be considered irrespective to labours.

### 3.3 QUESTIONNAIRE SURVEY

The prepared Questionnaire on human resource management in Construction industry is distributed to 75labors and their response have been extracted Responses from all three levels (large scale, medium scale and small scale) of companies are equally distributed.

### 3.4 DATA COLLECTION

The answered questionnaires were collected and the answers were ranked in order to obtain statistical data from the theoretical options. Ranking should be based on scale type. As five point scale was adopted, rank 1 represents the strongly disagree factor and rank 5 represents the strongly agree. In our case neutral point is suggested as rank 3. The neutral point represents neither positive nor negative condition, the frequency of respondents, that is, for every factor respondent's view may vary. The variation in views can be obtained through the answers from questionnaire survey.

### 3.5 DATA ANALYSIS USING STATISTICAL TOOL

SPSS Statistics is a software package used for statistical analysis. Long produced by SPSS Inc., it was acquired by IBM in 2009, and current versions are officially named IBM SPSS Statistics. Companion products in the same family are used for survey authoring and deployment (IBM SPSS Data Collection), data mining (IBM SPSS Modeler), text analytics, and collaboration and deployment (batch and automated scoring services).

## IV. RESULTS AND DISCUSSIONS

SPSS 17, a statistical tool is used to analyze the obtained data from Questionnaire. The values should be labeled in variable view of SPSS and the obtained data should be filled in data view.

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CLIMATIC CONDITION				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	5	6.7	6.7	6.7
DISAGREE	29	38.7	38.7	45.3
NEUTRAL	14	18.7	18.7	64.0
AGREE	21	28.0	28.0	92.0
STRONGLY AGREE	6	8.0	8.0	100.0
TOTAL	75	100.0	100.0	-
HVAC PROBLEM				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	5	6.7	6.7	6.7
DISAGREE	20	26.7	26.7	33.3
NEUTRAL	26	34.7	34.7	68.0
AGREE	20	26.7	26.7	94.7
STRONGLY AGREE	4	5.3	5.3	100.0
TOTAL	75	100.0	100.0	-
SITE CONDITION				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	7	9.3	9.3	9.3
DISAGREE	15	20.0	20.0	29.3
NEUTRAL	37	49.3	49.3	78.7
AGREE	14	18.7	18.7	97.3
STRONGLY AGREE	2	2.7	2.7	100.0
TOTAL	75	100.0	100.0	-
INNOVATIVE DESIGN METHODOLOGY				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	5	6.7	6.7	6.7
DISAGREE	13	17.3	17.3	24.0
NEUTRAL	14	18.7	18.7	42.7
AGREE	30	40.0	40.0	82.7
STRONGLY AGREE	13	17.3	17.3	100.0
TOTAL	75	100.0	100.0	-
CONSTRUCTIONAL ERRORS/FAULTS				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	4	5.3	5.3	5.3
DISAGREE	8	10.7	10.7	16.0
NEUTRAL	47	62.7	62.7	78.7
AGREE	14	18.7	18.7	97.3

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STRONGLY AGREE	2	2.7	2.7	100.0
TOTAL	75	100.0	100.0	-
<b>VOILATION OF CODES</b>				
	<b>FREQUENCY</b>	<b>PERCENT</b>	<b>VALID PERCENT</b>	<b>CUMULATIVE PERCENT</b>
STRONGLY DISAGREE	2	2.7	2.7	2.7
DISAGREE	6	8.0	8.0	10.7
NEUTRAL	29	38.7	38.7	49.3
AGREE	24	32.0	32.0	81.3
STRONGLY AGREE	14	18.7	18.7	100.0
TOTAL	75	100.0	100.0	-
<b>QUALITY MATERIALS</b>				
	<b>FREQUENCY</b>	<b>PERCENT</b>	<b>VALID PERCENT</b>	<b>CUMULATIVE PERCENT</b>
STRONGLY DISAGREE	2	2.7	2.7	2.7
DISAGREE	11	14.7	14.7	17.3
NEUTRAL	19	25.3	25.3	42.7
AGREE	32	42.7	42.7	85.3
STRONGLY AGREE	11	14.7	14.7	100.0
TOTAL	75	100.0	100.0	-
<b>DESOLATE MATERIAL USAGE</b>				
	<b>FREQUENCY</b>	<b>PERCENT</b>	<b>VALID PERCENT</b>	<b>CUMULATIVE PERCENT</b>
STRONGLY DISAGREE	4	5.3	5.3	5.3
DISAGREE	18	24.0	24.0	29.3
NEUTRAL	28	37.3	37.3	66.7
AGREE	15	20.0	20.0	86.7
STRONGLY AGREE	10	13.3	13.3	100.0
TOTAL	75	100.0	100.0	-
<b>MISHANDLING OF MATERIALS</b>				
	<b>FREQUENCY</b>	<b>PERCENT</b>	<b>VALID PERCENT</b>	<b>CUMULATIVE PERCENT</b>
STRONGLY DISAGREE	4	5.3	5.3	5.3
DISAGREE	10	13.3	13.3	18.7
NEUTRAL	19	25.3	25.3	44.0
AGREE	25	33.3	33.3	77.3
STRONGLY AGREE	17	22.7	22.7	100.0
TOTAL	75	100.0	100.0	-
<b>PROLONGED EQUIPMENT USAGE</b>				
	<b>FREQUENCY</b>	<b>PERCENT</b>	<b>VALID PERCENT</b>	<b>CUMULATIVE PERCENT</b>
STRONGLY DISAGREE	3	4.0	4.0	4.0
DISAGREE	15	20.0	20.0	24.0
NEUTRAL	29	38.7	38.7	62.7
AGREE	13	17.3	17.3	80.0
STRONGLY AGREE	15	20.0	20.0	100.0
TOTAL	75	100.0	100.0	-

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AVERAGE WORKING HOURS/DAY				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
< 8 HOURS	10	13.3	13.3	13.3
8 - 10 HOURS	64	85.3	85.3	98.7
10-12 HOURS	1	1.3	1.3	100.0
TOTAL	75	100.0	100.0	-
SITE CONGESTION FACTOR				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	4	5.3	5.3	5.3
DISAGREE	11	14.7	14.7	20.0
NEUTRAL	12	16.0	16.0	36.0
AGREE	30	40.0	40.0	76.0
STRONGLY AGREE	18	24.0	24.0	100.0
TOTAL	75	100.0	100.0	-
DESIGN COMPLEXITY				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	6	8.0	8.0	8.0
DISAGREE	22	29.3	29.3	37.3
NEUTRAL	30	40.0	40.0	77.3
AGREE	12	16.0	16.0	93.3
STRONGLY AGREE	5	6.7	6.7	100.0
TOTAL	75	100.0	100.0	-
ON TIME PAYMENT				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	5	6.7	6.7	6.7
DISAGREE	8	10.7	10.7	17.3
NEUTRAL	26	34.7	34.7	52.0
AGREE	23	30.7	30.7	82.7
STRONGLY AGREE	13	17.3	17.3	100.0
TOTAL	75	100.0	100.0	-
ACCOMMODATION AND FOOD				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	4	5.3	5.3	5.3
DISAGREE	6	8.0	8.0	13.3
NEUTRAL	36	48.0	48.0	61.3
AGREE	17	22.7	22.7	84.0
STRONGLY AGREE	12	16.0	16.0	100.0
TOTAL	75	100.0	100.0	-
EQUIPMENT MALFUNCTION				
	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT

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STRONGLY DISAGREE	7	9.3	9.3	9.3
DISAGREE	24	32.0	32.0	41.3
NEUTRAL	16	21.3	21.3	62.7
AGREE	20	26.7	26.7	89.3
STRONGLY AGREE	8	10.7	10.7	100.0
TOTAL	75	100.0	100.0	-

**POOR MAINTENANCE OF EQUIPMENTS**

	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	5	6.7	6.7	6.7
DISAGREE	7	9.3	9.3	16.0
NEUTRAL	28	37.3	37.3	53.3
AGREE	23	30.7	30.7	84.0
STRONGLY AGREE	12	16.0	16.0	100.0
TOTAL	75	100.0	100.0	-

**SUFFICIENT MEN AND MATERIALS**

	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
STRONGLY DISAGREE	3	4.0	4.0	4.0
DISAGREE	7	9.3	9.3	13.3
NEUTRAL	24	32.0	32.0	45.3
AGREE	34	45.3	45.3	90.7
STRONGLY AGREE	7	9.3	9.3	100.0
TOTAL	75	100.0	100.0	-

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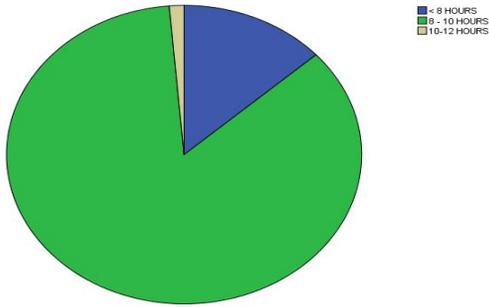
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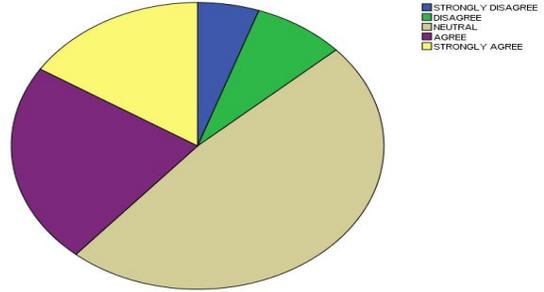
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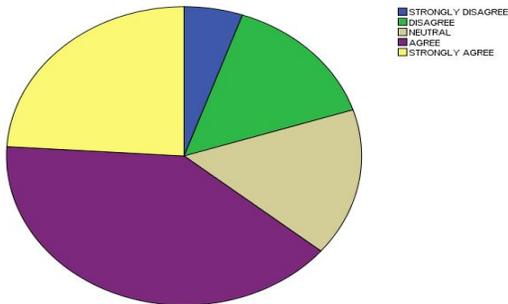
AVERAGE WORKING HOURS/DAY



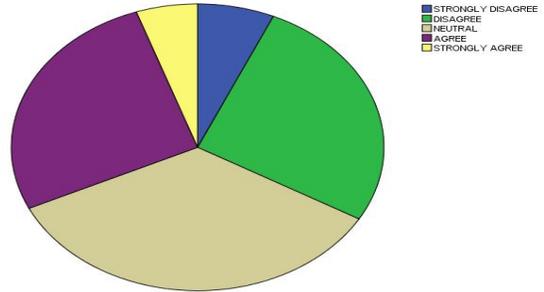
ACCOMMODATION AND FOOD



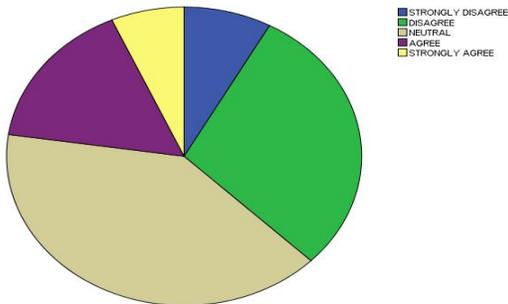
SITE CONGESTION FACTOR



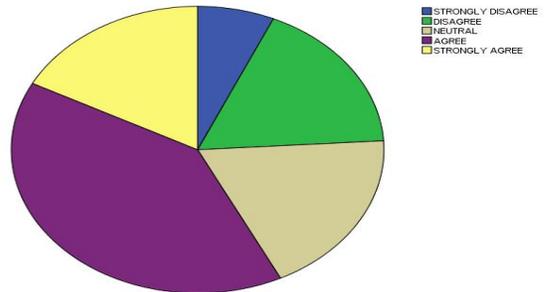
HVAC PROBLEM



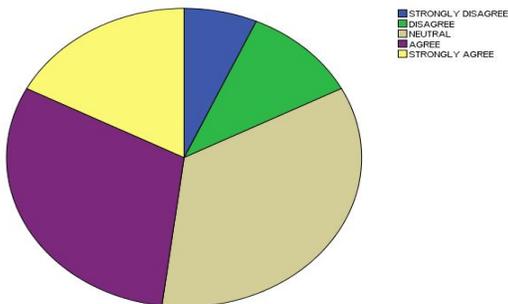
DESIGN COMPLEXITY



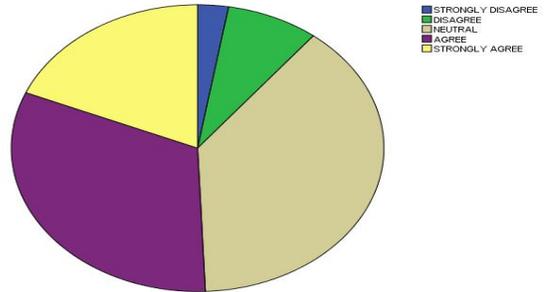
INNOVATIVE DESIGN METHODOLOGY



ON TIME PAYMENT



VIOLATION OF CODES



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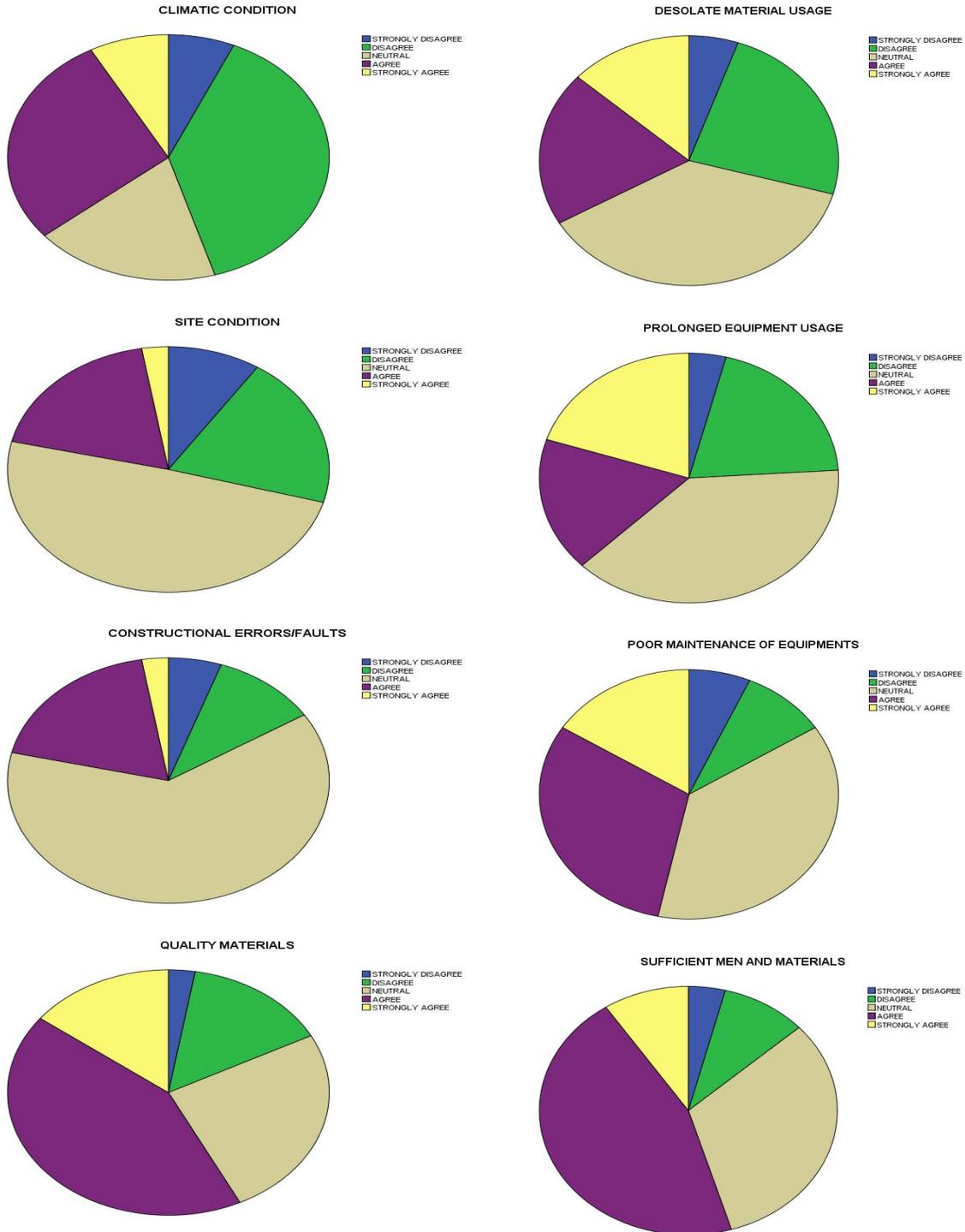
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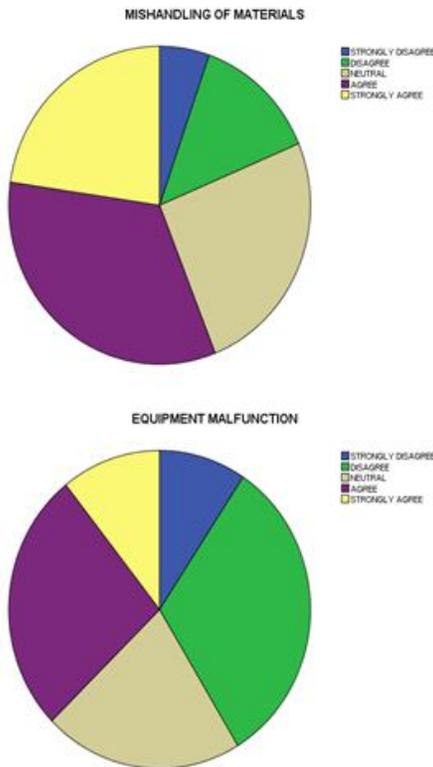
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## V. CONCLUSION AND RECOMMENDATIONS

From the response attained from various labors in many construction sites, the following are some of the inferences made from the obtained results which possess >50% impacts.

- 64 % of the people fairly agree that site congestion is creating them to work uncomfortably and 20 % of people disagrees this statement but 16% of people gave neutral answer for this factor. However this explains that site congestion will reduce the productivity of a labour in high range.
- 57 % of the people fairly agree that innovative design methodology will discomfort their job and 24 % of people disagrees this particular statement but 19 % of the people answers neutrally for this statement. Hence normal design methodology has to be adopted in constructional works.
- 52 % of people neutrally answers that they possess good satisfaction in their work and 32 % of people agrees this statement but 16 % of people states that they didn't get work satisfaction in their job. So, proper job satisfactory method has to be handled by the firm in such cases.
- 54% of people agree that their firm is providing quality materials for construction, 32% of people answers neutrally to this statement and the balance 14% of people disagree this statement. Thus it is the primary duty of all firms to provide good quality materials for construction.
- 60% of the people agrees that their co-workers are mishandling materials due to lack of training and 20% of people answers neutrally to this statement but the balance 20% of people disagrees this statement. Thus, sufficient training is essential to labours for handling materials in a proper manner.

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### LIST OF PUBLICATIONS :

- Presented the paper titled “Study on the Impact of Human Resource Management in Construction Industry” in the International Conference on Emerging Trends in Engineering and Technology – ICETET 2013 On 4<sup>th</sup> – 5<sup>th</sup>, October 2013 at Munnar organised by Business management research (BMR).
- Presented the paper titled “Study On The Impact Of Human Resource Management Practices On Turnover, Productivity And Financial Performance In Construction Industry” in the International Conference on Advances in Industrial Engineering Applications, ICAIEA2014 January 6-8, 2014, Anna University, Chennai, India.