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INVESTIGATION OF ISSUES AFFECTING ON HUMAN RESOURCE MANAGEMENT IN CONSTRUCTION FIRMS

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Abstract: An organization's human resources are necessary to carry out various commercial tasks. The organization cannot exist or function successfully without the help of human resources. In general, the construction sector frequently has challenges in fulfilling project completion schedules and budgets due to a lack of trained labour and staff to complete the intended job. This level of complexity may be controlled and such difficulties can be dealt with effectively using human resource management approaches to avoid labour shortages.

The efficient utilization of human resources is critical to any organization's success. In India, human resources are the most important contributory force for any firm. As a result, human resource management (HRM), or the management of human resources, must become increasingly important in India. A detailed survey was conducted to identify HRM-related issues within the construction company, and the results were analyzed with a particular focus on the human resource practices that are commonly followed in the south Indian construction industry, the availability of skilled labour, and the formal or informal methods or forms commonly used for human resource management. In this work the issues affecting human resource management and its effect in the functioning of the organization has been studied and analyzed using Relative Importance Index (RII) Method. The data is entered using MS Excel and the analysis is done using MS Excel. Microsoft Excel is a spreadsheet developed by Microsoft for Windows, Android and IOS. It features calculation or computation capabilities, graphing tools, pivot tables.

Index Terms *- human resource management, questionnaire, surveys, relative importance index* (RII) method

I.INTRODUCTION

Construction industries are one of the most important areas that contribute to a country's GDP(Attar A.A,Gupta A. K, Desai D.B,2013). The construction sector is a substantial contributor to other industries due to multiplier effects. A company's capacity to attract, develop, and retain skilled personnel is critical to its success. Work groups, on the other hand, are the most challenging resource for corporations to manage. Human people, unlike physical resources, have personal needs that must be met and habits that must be controlled by an employer as long as they contribute to organisational growth and development. People, as people, bring their own viewpoints, attitudes, and characteristics to the workplace, and if these are skillfully managed, human personality can provide significant benefits to enterprises. However, if properly managed, they have the potential to significantly constrain organisational growth and compromise a company's existence. Human behaviour has caused numerous corporate and project crises in the construction industry, and it appears that human resources management (HRM) methods have the ability to remove more risks in the construction industry than any other management approach.

Construction is defined as the process of constructing or assembling infrastructure. Multi-tasking is required for large-scale building. The project manager is usually in charge of the project, and the construction manager, design engineer, construction engineer, or project architect is in charge of the supervision. Many factors must be considered throughout the building of any sustainable development project, including human resources, safety and health, construction delays, architectural and engineering designs, material availability and quality, client needs, and financial or economic constraints. Human resource management is one of the most important areas of this research.

II. DATA COLLECTION

The procedure of collecting, measuring, and evaluating correct insights for research using established approved procedures is referred to as data collection. On the basis of the facts gathered, a researcher might evaluate their hypothesis. Regardless of the subject of study, data collecting is usually the first and most significant phase in theresearch process. Depending on the information needed, different approaches to data gathering are used in different disciplines of study. The most important goal of data collecting is to collect information-rich and accurate data for statistical analysis so that data-driven research decisions may be made.

In most cases, data collection and questionnaire design begin with the preparation of a large sample questionnaire for a literature study. A pilot survey with 25 participants was undertaken to assess the questionnaire's reliability and clarity. The questionnaire was finally double-checked by four higher-ranking professionals. As a result, the clarity, completeness, and applicability of the questionnaire have been confirmed. The major data for this study was gathered through questionnaires, which were filled out by a variety of unskilled labours. The questionnaire looks into the issues thatconstruction workers face.

III. LITERATURE REVIEW

Liu Chong, Rhodora A. Ngolob, and Thelma D. Palaoag (2020) The level of effectiveness of Human Resource Management practices along training, career planning, compensation, performance appraisal job definition and employee participation of Long Hope Communications Co. Ltd. in maintaining the productivity of employees is high. However, the level of efficiency in the conduct of Human Resource Management practices is moderate. Majority of the problems encountered by the managers include the lack of interest of employees, insufficient communication of information concerning career options and opportunities with the organization, lack of fringe benefit and lack of involvement of employees in decision making.

Sena A. Agyepong, Frank D.K. Fugar and Martin M. Tuuli (2019) The factors that affect the development of HRM policies in of themselves are no respecters of the part of the world one finds them. It can be clearly said from the empirical evidence presented that, the organizational situational factors identified by the Harvard model (Beer et al, 1984) as accounted for by Boxall (1992) to include workforce characteristics; the business strategy and conditions; management philosophy; labour markets; unions; task technology and laws and social values, affect the development of HRM policies in large construction companies operatingin Ghana.

Mahamid I., Al-Ghonamy A., Aichouni M (2013) The study aims at identifying the factors affecting labor productivity in public construction projects in Saudi Arabia from contractors' viewpoint. To do so, 41 contractors working in public construction completed a structured questionnaire survey and the factors were ranked according to their impact level. 32 factors were identified through literaturereview. These factors were grouped into five groups: labor, managerial, materials and equipments, project, and financial.

Nukić et al. (2013) measured the influence of different HRM activities on businessresult of construction companies in Croatia considering 18 independent variables classified in 4 groups and 7 control variables in their model. They suggested that, among other human resources activities, the material motivation activities have the most significant impact on business results. In the end, they recommended to employers in construction not to neglect the influence of HRM activities, especiallymaterial motivation, on the performance of the company.

Attar A. A., Gupta A. K., Desai D. B (2013) The groups of factors which are highly effective are: supervision, material, execution plan, and design. Moreover, for large companies, equipment factors have also highly effective. While in small and medium companies, owner/consultant factors also need special attention because ithas high effect too

Al-Jabari (2012) studied three factors that affect HR practices in some Palestinian organizations: firm size (No. of employees), sector (whether government, private or nongovernment organization), and profitability (profit vs. non-profit organization). Findings show that larger firms apply more formalized HR practices than smaller firms do; also nonprofit sector is practicing HR higher than profit sectors. Rouyendegh et al. (2012) presented a real case study, which examined a fuzzy Analytic Hierarchy Process (FAHP) for selecting the most suitable academic staff, where five candidates under ten different sub-criteria are evaluated and prioritized.

Durdyev et al. (2011) identified the key constraints of on-site labor productivity in the New Zealand construction industry and prioritized the constraints based on the irrelative levels of impact. 56 sub-factors had identified under 8 broad categories of internal and external constraints. Results showed that compared to the external factors, the internal constraints were found to contribute far more to the on-site lab or productivity issues.

IV. RESEARCH METHODOLGY

The data is gathered using a questionnaire survey method, which is then analysed to rank the factors evaluated in terms of significance. The survey is sent out to major stakeholders in the construction industry, such as unskilled employees and labourers.

Fig 3.1 Flow chart of methodology

The data and opinion sections of the questionnaire are divided into two sections: demographic questions and multiple choice Likert scale questions.The data was gathered using an experimental questionnaire survey of respondents participating in daily activities of construction enterprises in various locations of India's southern region to find the most significant elements on project management.The questionnaire was created so that respondents could rank their responses basedon their personal preferences. An approach known as the relative relevance index (RII) method was used to analyse these data.

V.OBJECTIVES OF THE STUDY

1. To study the human resource practices followed in the Indian constructionindustry.
2. To determine the factors that influence construction enterprises' human resourcemanagement.
3. To ascertain the workers' perceptions of the relative importance of important HRM indicators in Indian construction enterprises.
4. To determine the most important critical indicators of HRM in Indianconstruction enterprises.
5. Using the Relative Important Index Method, prioritise the causes by conducting a questionnaire survey and assessing the findings.

VI. NEED OF THE STUDY

Human resources are the most difficult to manage in the construction industry since, unlike other businesses, they are not usually permanent. They may vary from project to project, location to location, period to time, and job type to work type. As a result, human resource management considerations are extremely important for any construction company. Furthermore, the reviewed literature indicates that there is a great need to conduct this type of quantitative research, as similar work has been done in the past. This thesis examines the elements that influence the frontline labours for effective human resource utilisation (which is the responsibility of human resource management) in construction enterprises and creates a model. Thus, it is highly worthwhile to conduct research in this manner, which includes integrating previous literature, constructing a model, and lastly conducting the inquiry.

VII. FRAMING OF QUESTIONNAIRE

A questionnaire can be an effective way to collect data. It can be used for survey research, data collection, or hypothesis testing. You must develop a questionnaire that is simple to comprehend and complete in order for it to be effective and provide you with the information you require. A questionnaire is a research that consists of a set of questions and other prompts that are used to collect data from respondent .Sir Francis Galton is the inventor of the questionnaire. A questionnaire is a method of obtaining responses to questions by having the respondent fill out a form on his own. It is made up of a set of questions that are printed or typed in a specific order.These forms are addressed to the respondent, who is expected to read and understand the questions and respond by filling in the blanks with the appropriate responses. A speaking respondent should, in theory, respond to a spoken stimulus with a written or vocal response. There isn't a single table in sight. Its goal is to gather data from respondents who are dispersed throughout a large area. A questionnaire, according to Goode and Hatt, is a device for obtaining answers to questions by using a form that the respondent fills out oneself.

These forms are mailed to the person who was supposed to answer. The questionnaire was divided into two sections. The first section enquires about the respondent's background. The next section contains ordinal data (Five-Point LikertScale) that was used to gather information on the primary elements that influence project length in the construction sector. The respondents were asked about their jobtitle and experience in the survey. As far as feasible, the responses were gathered from designated respondents who are capable of providing the greatest possible service and responding to the survey in the most appropriate manner. The following are the reasons for using this simple scale:

1. To provide simplicity for the respondent to answer.
2. To make evaluation of collected data easier.
3. To get a clear state of agreement of the factors.

The premise of evaluating attitudes using a Likert scale entails asking people to answer to a series of statements about a topic in terms of how much they agree with them, so tapping both the cognitive and emotive components of attitudes. A Likert scale is used to represent how much a person agrees or disagrees with a message. As stated in the following sections, it reflects the level of agreement with each statement (from 1 to 5). As a result, quantitative data is collected that may be evaluated rather easily.

VIII. DATA COLLECTION

Data was gathered using primary questionnaires and personal interviews, as well as data from peer-reviewed literature relevant to the construction business. For creating further connection between primary and secondary data sets, the most important and relevant secondary data set is chosen and incorporated.

The data was gathered using an exploratory questionnaire survey of respondents participating in daily operations of construction firms in various locations of India's southern region to establish the most significant elements on HRM practises of construction firms. All the questions are framed objective type or ticking the answerformat so that it can be easily answered and wouldn't take much time. Some of themeasure barriers are listed after studying the literature properly and are asked to scale from 1 to 5 in respect of their probability of occurrence. The questionnaire has to be filled through online platform and by direct interviews to unskilled and skilled labours. They were requested to answer the same as per theirpoint of view. These data were analysed using the Relative Importance Index (RII) approach in Microsoft Excel.

8.1 Population and Sample Size

The population to be considered is the entire workforce of Kerala's construction companies. It is self-evident that conducting interviews with each and every company in Kerala requires a significant amount of effort in a variety of areas. Firstand first, both parties require a significant amount of time, and second, money. Furthermore, there is an additional challenge: it is difficult to reach each and every person concerned since they will be busy at the time of the interviews. There are several methods for determining the study's sample size. For small populations, these methods include using a census, emulating a sample size from similar research, using published tables, and finally employing formulas to generatea sample size. Due to the difficulty in acquiring accurate and trustworthy data on the population of construction enterprises in Kerala, the study used a total sample size of 100 labours from different companies in the Kerala State. Only frontline labours, including migrants, were examined for the study in order to assess the effectiveness of Human Resource Management.

8.2 Sample Size Calculation

To obtain statistically representative sample size of the population, followingequation (8.1) is used:

$$n = \frac{m}{1 + \left[\frac{m-1}{N}\right]} \quad \text{..... (8.1)}$$

Where, n, represents the sample size of limited, unlimited and availablepopulation respectively. Here, m is calculated by following equation (3.2).

$$m = \frac{z^2 * p * (1-p)}{e^2} \quad \text{.....(8.2)}$$

Where,

z = the statistic value for the confidence level used, i.e. 1.96 and 1.645 for 95% and90% confidence level respectively

p = the value of the population that estimated

e = the sampling error to estimated, because the value of p is unknown. (Sinich etal. (2002) suggest the value 0.5 to be used in sample size.)

8.3 RANKING METHOD

Relative Importance Index (RII) Method helps to determine the relative importance of the various factors affecting HRM of major construction firms. The five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree)is adopted and it is transformed to relative importance indices (RII) for eachfactor as follows:

$$RII = \frac{\sum W}{A \times N} \quad \text{..... (8.3)}$$

Where,

W = the weight given to each factor by the respondents and ranges from 1 to 5A = the highest weight = 5

N = the total number of respondents

IX. RESULTS AND DISCUSSIONS

Among the respondents,54% of the labours had primary education ,26% of them had secondary education and the remaining 20% of the respondents had completed higher secondary education.

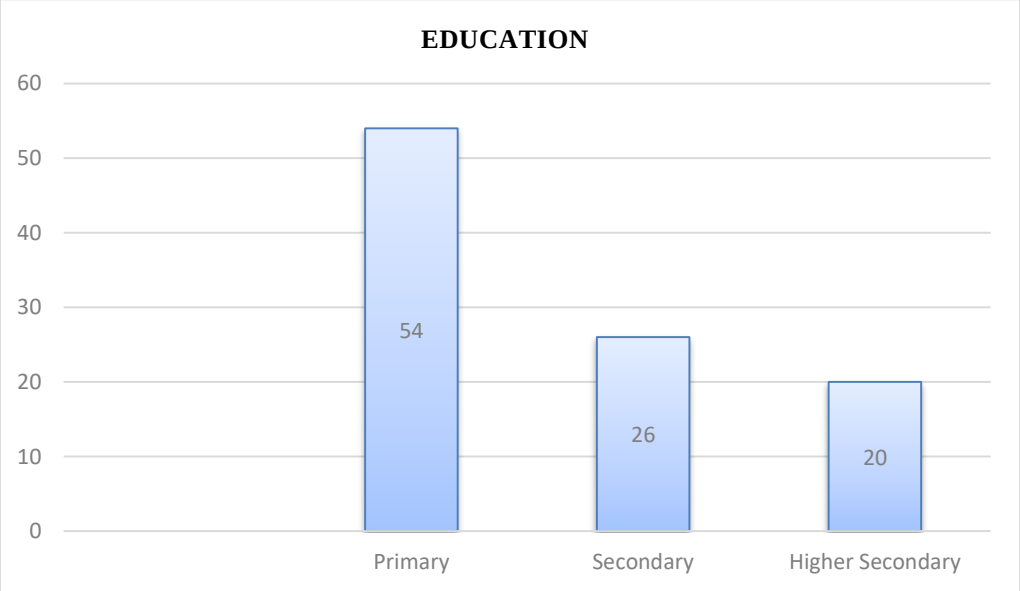

Fig 9.1 Education wise Distribution of Respondents

Among the respondents,32% of the people belonged to the age group less than 25 years, 41% of them belonged to the age group of 26 -35 years, 23% of the respondents belonged to 36 -50 years and 4% of the respondents belonged to the age group greater than 50 years.

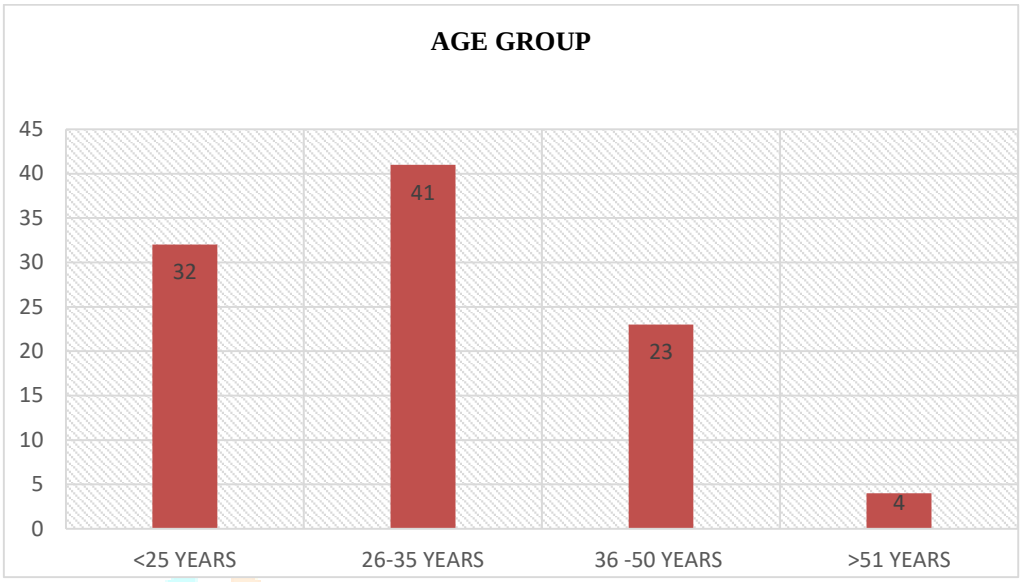

Fig 9.2 Age wise Distribution of Respondents

Among the respondents,17% of respondents had less than 1 year of experience,27% of respondents had 1-5 years of experience,25% respondents had belonged to 5-10 years of experience and 31% of respondents had more than 10 years of experience

Fig 9.3: Experience wise Distribution of Respondents

The questionnaire was distributed to various stakeholders by informing them regarding the purpose of the research and asking them about their willingness to participate in the research. Once the initial willingness was shown by the respondents, a questionnaire was given to them. Total 100 questionnaires were distributed to different respondents in various organisations at different districts of Kerala.

Table 9.1 Ranking by RII Method for Overall Response

GROUP	SLNO	FACTORS	∑W	N	RII	RANK
A	1	Regular job analysis	375	100	0.750	14
	2	Regular human resource planning	402	100	0.804	9
	3	Emphasis on service employees	362	100	0.724	15
	4	Human resource information system	252	100	0.504	26
	5	Employee attitude surveys	322	100	0.644	20
B	6	Opportunities for training	435	100	0.870	1
	7	Money spent on Programme	415	100	0.830	5
	8	Systematically structured training process	403	100	0.806	8
	9	Attendance of workers	360	100	0.720	16
	10	Kinds of training	392	100	0.784	11
C	11	Probability of promotion	353	100	0.706	17
	12	Regular Performance appraisal	380	100	0.760	12
	13	Good working environment	411	100	0.822	6
	14	Proper HR information system	421	100	0.842	3
	15	Timely Payment	393	100	0.786	10
D	16	Awareness to the employees	430	100	0.860	2
	17	Employees involvement in decisions	405	100	0.810	7
	18	Involvement in suggesting improvements	419	100	0.838	4
	19	Flexible work hours	245	100	0.490	27
	20	Clearly defined duties	201	100	0.402	29
E	21	Life security	302	100	0.604	22
	22	Job security	213	100	0.426	28
	23	Insurance	290	100	0.580	23
	24	Accommodation	310	100	0.620	21
	25	Health Service	325	100	0.650	19
F	26	Labour strikes	272	100	0.544	25
	27	Labour acts	278	100	0.556	24
	28	Disputes	200	100	0.400	30
	29	Trade unions	353	100	0.706	17
	30	Large volume of work	376	100	0.752	13

X.CONCLUSION

Knowing how to apply human resource management practises to the overall administration of a construction company and its operations can make our lives easier and increase overall performance. The results from calculations of Relative Important Index (RII) Method from labours point of view indicates that the most important factors affecting HRM of construction firms are: Opportunities for training, Awareness to the employees, Proper HR information system, Involvement in suggesting improvements , Money spent on Programme, Good working environment, Employees involvement in decisions, Systematically structured training process, Regular human resource planning ,Timely Payment.

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