

Improving the Labour Productivity through Other Resources in Construction Field

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ABSTRACT

Productivity remains an intriguing subject and a dominant issue in the construction sector, promising cost savings and efficient usage of resources. Productivity is one of the most important issues in both developed and developing countries. 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 labour laws.

HR now focuses on strategic initiatives like mergers and acquisitions, talent management, succession planning, industrial and labour relations, and diversity and inclusion. 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. Based on those factors a questionnaire has been prepared in labours point of view. In this thesis, questionnaire survey have been conducted with various companies among **100 labours** 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.

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.

2.0 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.

2.1 FACTORS IRRESPECTIVE TO LABOURS

2.1.1 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.

2.1.2 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.

2.1.3 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.

2.1.4 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.

2.1.5 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.

2.1.6 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.

2.1.7 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.

2.1.8 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.

2.1.9 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.

2.1.10 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.

3.0 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 100labors and their response have been extracted Responses from all three levels (large scale, medium scale and small scale) of companies are equally distributed.

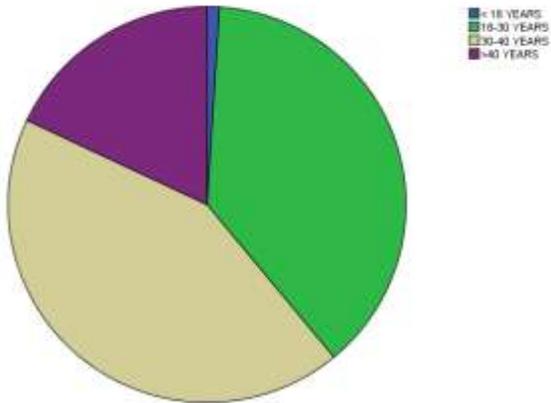
3.5 DATA ANALYSIS USING STATISTICAL TOOL

The answered questionnaires were collected and using SPSS software it is analysed.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).

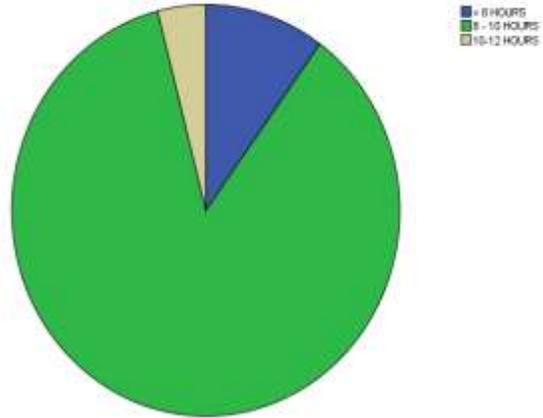
4.0 RESULTS AND DISCUSSIONS

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

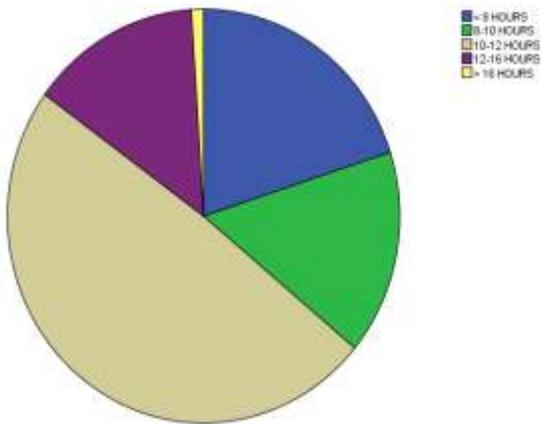
AGE



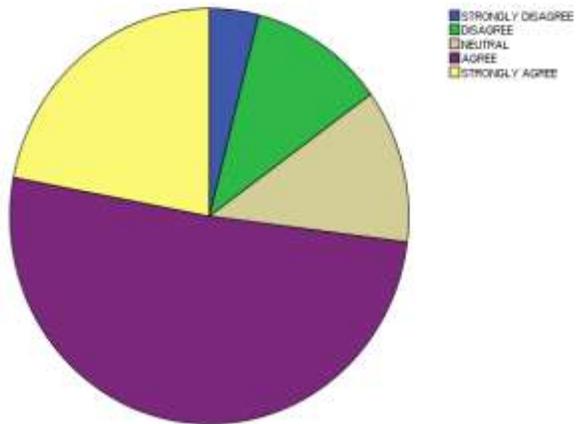
AVERAGE WORKING HOURS/DAY



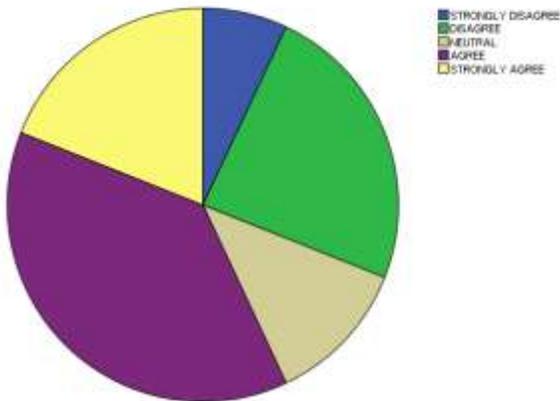
AVERAGE WORKING HOURS YOU CAN DO / DAY



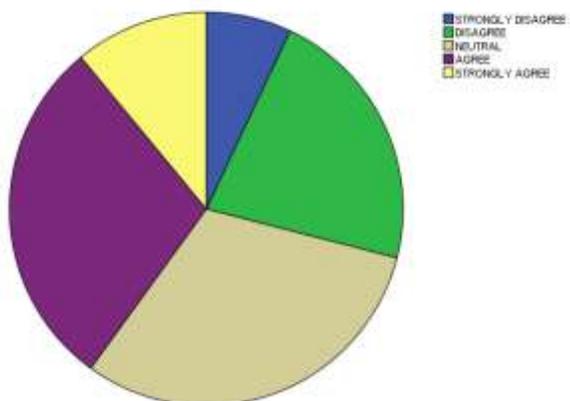
SITE CONGESTION FACTOR



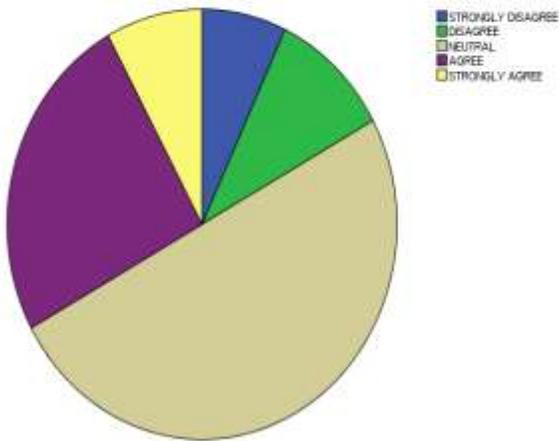
OVER TIME WORK



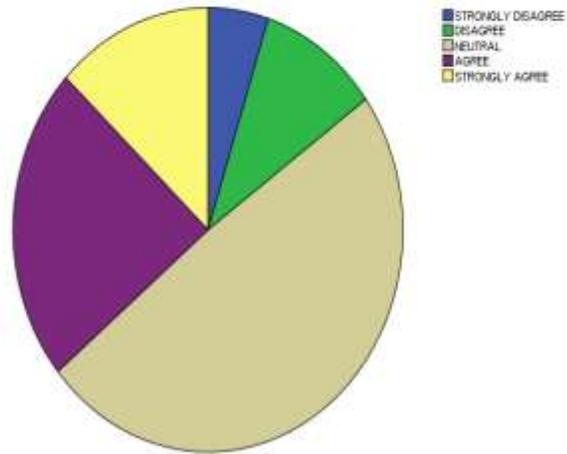
DESIGN COMPLEXITY



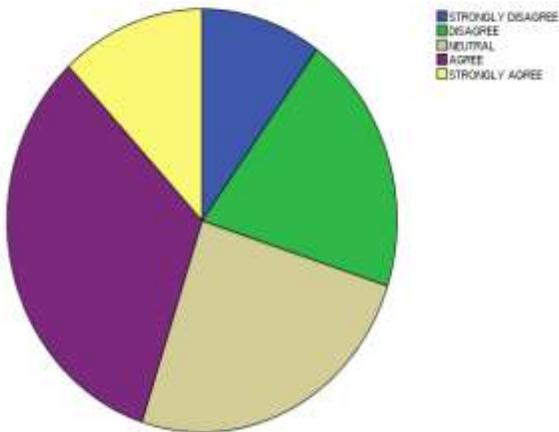
INCENTIVE/FINANCIAL REWARDS



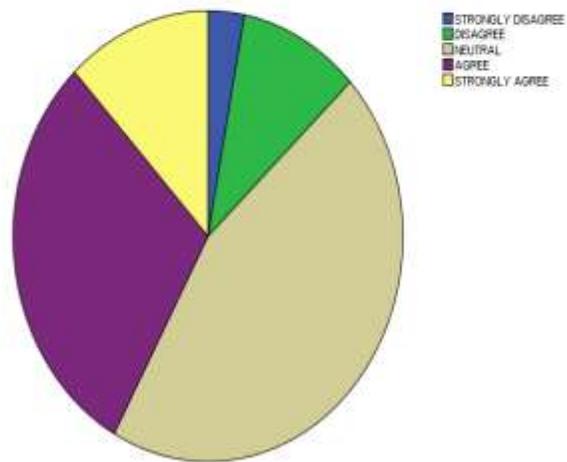
ON TIME PAYMENT



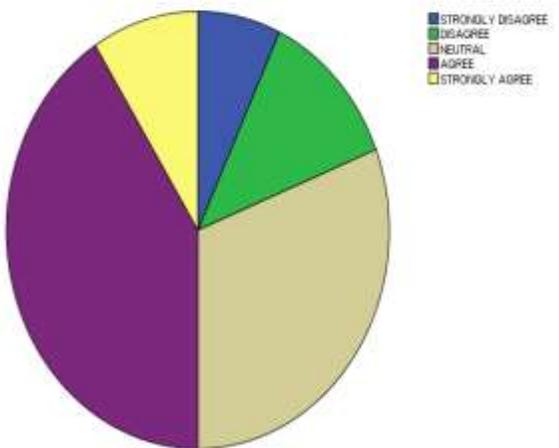
DISCONTINUITY OF WORK SCHEDULE



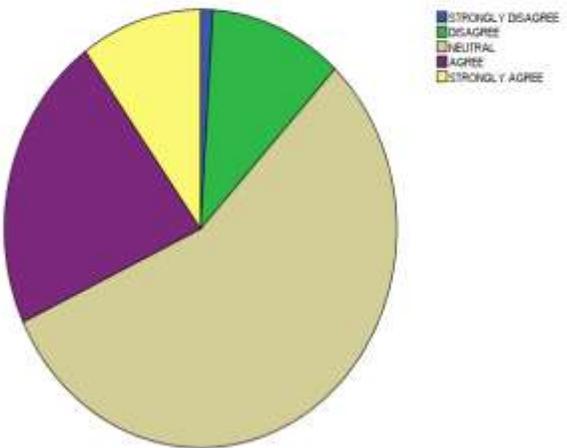
SUFFICIENT AMOUNT OF PAY

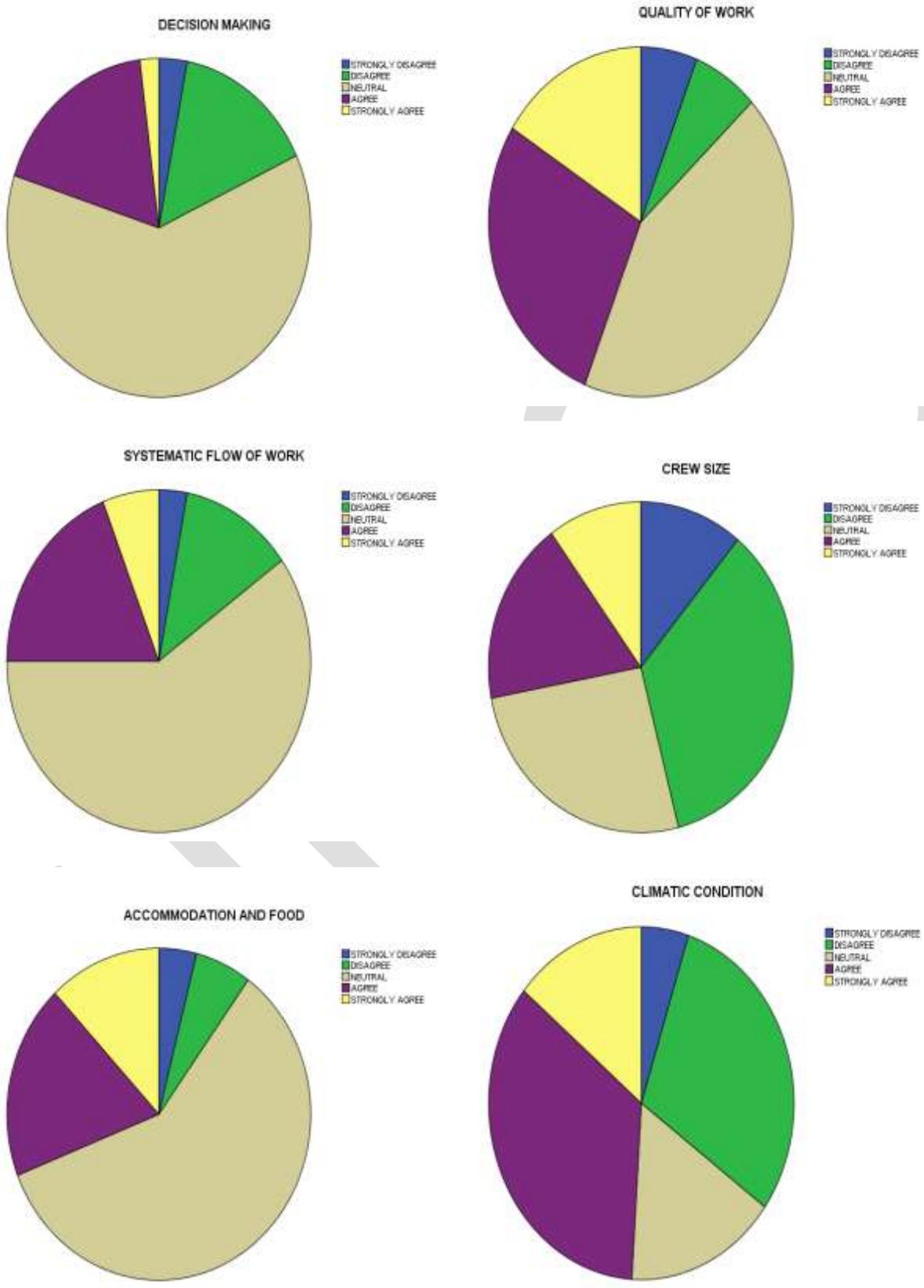


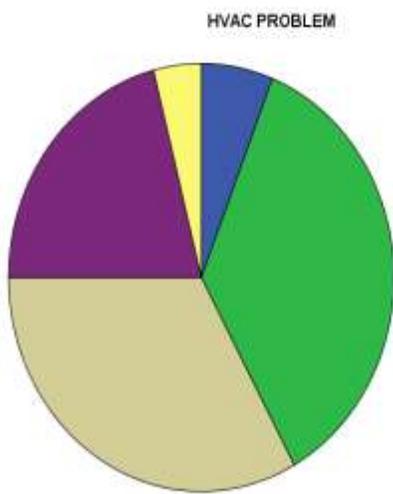
CULTURAL DIFFERENCE



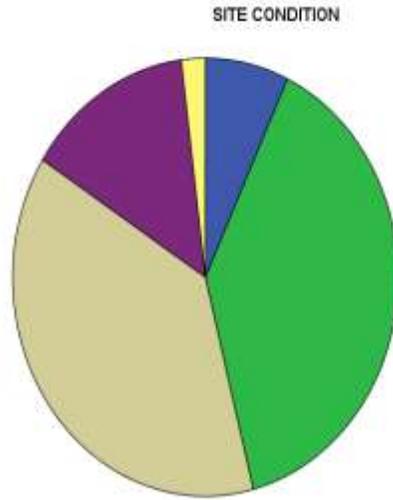
WORK SATISFACTION



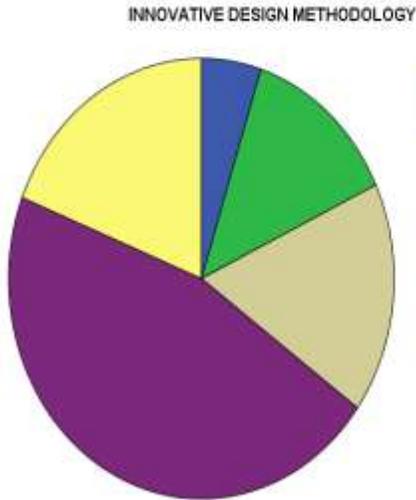




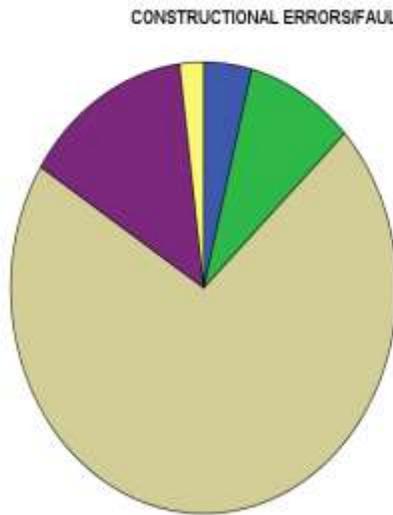
■ STRONGLY DISAGREE
■ DISAGREE
■ NEUTRAL
■ AGREE
■ STRONGLY AGREE



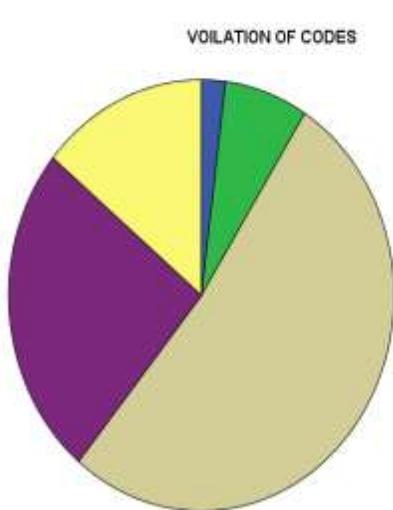
■ STRONGLY DISAGREE
■ DISAGREE
■ NEUTRAL
■ AGREE
■ STRONGLY AGREE



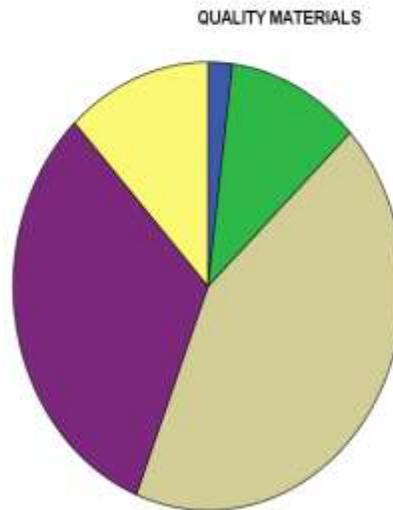
■ STRONGLY DISAGREE
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■ STRONGLY AGREE



■ STRONGLY DISAGREE
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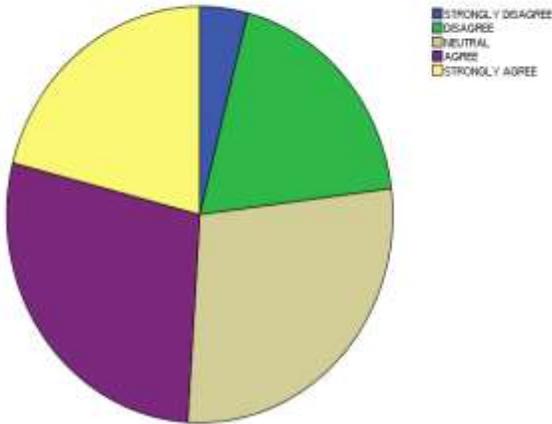


■ STRONGLY DISAGREE
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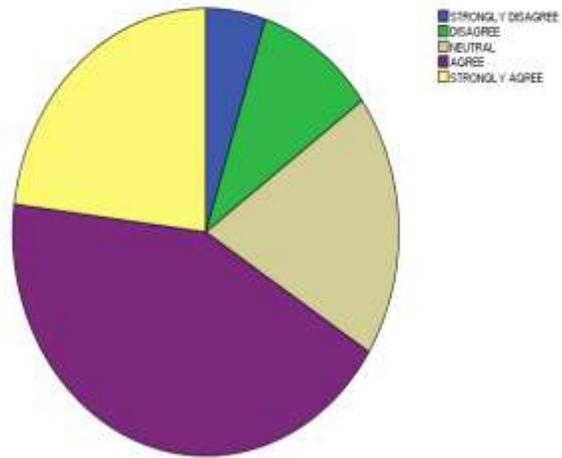


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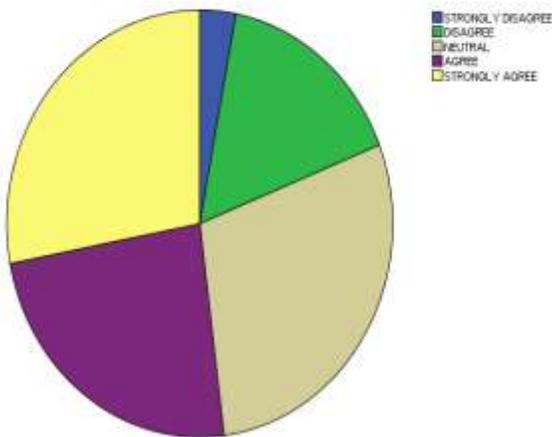
DESOLATE MATERIAL USAGE



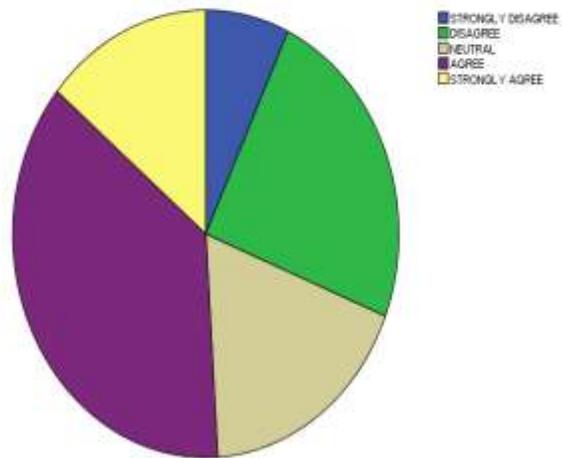
MISHANDLING OF MATERIALS



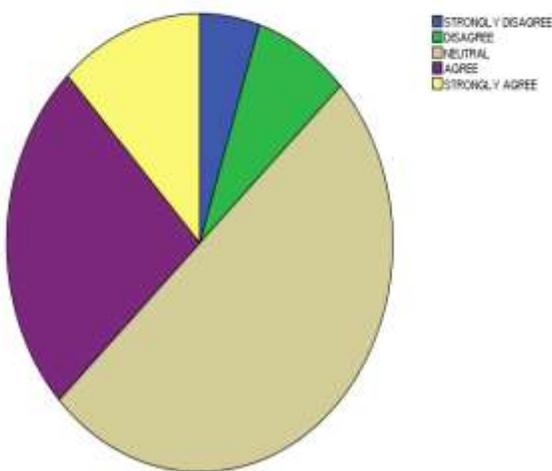
PROLONGED EQUIPMENT USAGE



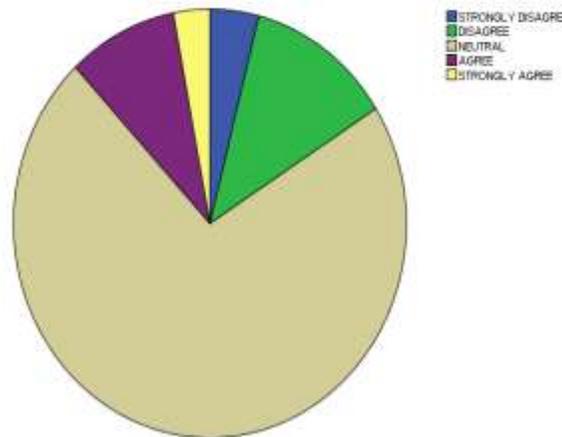
EQUIPMENT MALFUNCTION



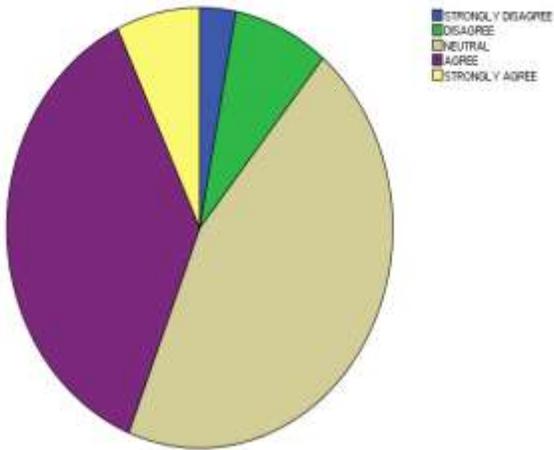
POOR MAINTENANCE OF EQUIPMENTS



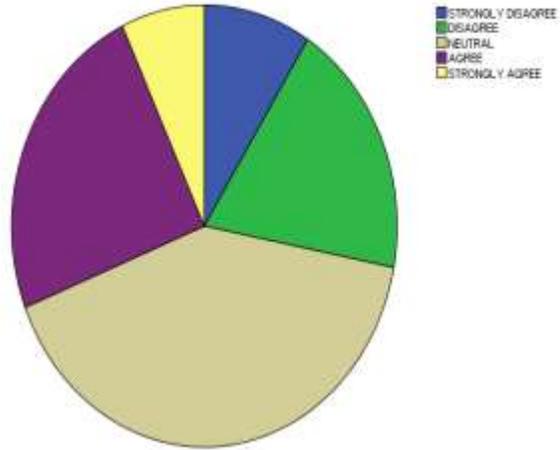
TRAINING FOR OPERATING EQUIPMENTS



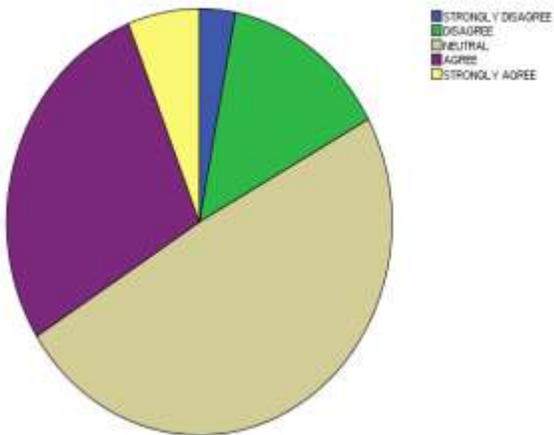
SUFFICIENT MEN AND MATERIALS



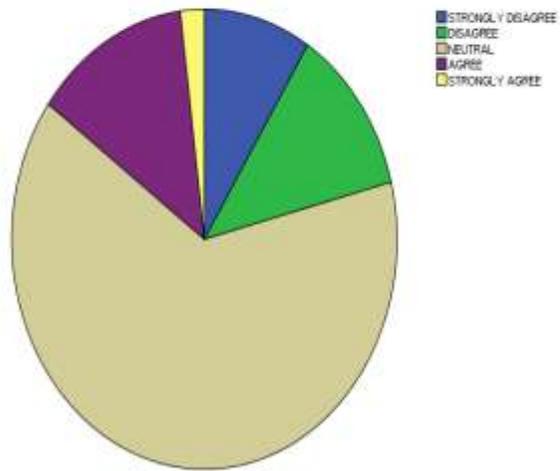
TIME PERIOD FOR ACCOMPLISHMENT



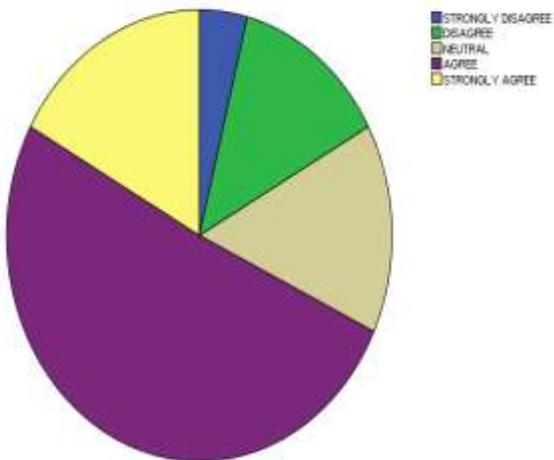
TRANSPORTATION FACILITY



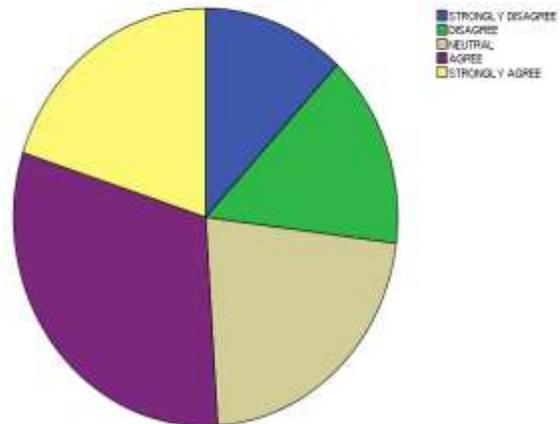
POLITICAL/GOVERNMENTAL PROBLEMS



IMPROPER RESOURCE MANAGEMENT



CONTRACTUAL CONFLICTS



CONCLUSION AND RECOMMENDATIONS

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

75 % of the people fairly agree that site congestion is creating them to work uncomfortably and 15 % of people disagrees this statement but 10% of people gave neutral answer for this factor. However this explains that site congestion will reduce the productivity of a labour in high range.

70% of people agrees that their firm is following an improper form of resource management and 15% of people answers neutrally to this statement but the balance 15% of people disagrees this statement. Thus the firm should be trained enough to follow an proper resource management scheme.

65 % of the people fairly agree that innovative design methodology will discomfort their job and 20 % of people disagrees this particular statement but 15% of the people answers neutrally for this statement. Hence normal design methodology has to be adopted in constructional works.

65% 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 15% of people disagrees this statement. Thus, sufficient training is essential to labours for handling materials in an proper manner.

60 % of people fairly agrees that over time work losses their efficiency and 30 % of people agrees this statement but only 10 % of people disagrees this statement. Thus over time work shouldn't be imposed to labours.

REFERENCES:

- Brandenburg, S. G.** (2004) "The Tier I Workforce Management Strategy: Concept and application." Ph.D. thesis, University of Texas at Austin, Austin, Tex.
- Borcherding, J. D., Glover, R. W., Haas, C. T., and Tucker, R. L.** (2001) "Metric-based implementation of the Tier II Work Force Strategy." Rep. 20, University of Texas at Austin, Austin, Tex.
- Castañeda-Maza, J.** (2002) "Workers' skills and receptiveness to operate under the Tier II construction management strategy." Ph.D. thesis, Univ. of Texas at Austin, Austin, Tex.
- Construction Users Round table** (UP-403 March 2005) "Construction Labor: Managing the Construction Workforce".
- Construction Users Round table** (R-411 November, 2009) "Construction Workforce: Building Comprehensive Labor Market Information".
- Chang, S.-W.** (2002) "Development and assessment of the Tier II Work Force Strategy implementation index." Ph.D. thesis, Univ. of Texas at Austin, Austin, Tex.
- Donald I. Hamilton** (Summer 2006), Pakistan Economic and Social Review Volume XLIV, No. 1 pp. 1-18 "Contract Staff Management System In The Construction Industry In Nigeria".
- Fagbenle Olabosipo I. Ogunde Ayodeji O. Owolabi James D.** (Vol.2, No.2, May 2011) ISSN 2039 - 2117 Mediterranean Journal of Social Sciences, "Factors Affecting the Performance of Labour in Nigerian Construction Sites" Department of Building Technology Covenant University Ota, Ogun State, Nigeria.
- Hans e. Picard, sc.d.,** pres/ceo, p+a innovators, corp. (2004) by the construction management association of America "Driving Down Construction Project Labor Cost".
- Henry Mwanaki Alinaitwe** (April 2006) "Labour Productivity in the Building Industry – Studies of Uganda" Licentiate Thesis, ISSN 1651 – 0380, Construction Management Publications ISBN 91–85257–05–2 Construction Management 06/1020-SE .
- Irene Lill ISARC-2008** (June 26-29, 2008) "SUSTAINABLE MANAGEMENT OF CONSTRUCTION LABOUR" Tallinn University of Technology, Department of Building Production, Professor Ehitajate 5, 19086 Tallinn, Estonia.
- Mohammed Salleh Hammad, Abdelnaser Omran, Abdul Hamid Kadir Pakir** (2011) ACTA TECHNICA CORVINIENSIS – Bulletin of engineering tome iv ISSN 2067-3809. "Identifying ways to improve productivity at the construction industry"
- Serdar Durdyev and Jasper Mbachu,** (Massey University, New Zealand) (2010) "On – Site Labour Productivity Of New Zealand Construction Industry".
- Takashi Goso, Kohei Imoto** (2010) Kochi University of Technology "Development and improvement of labor productivity assessment system".
- Valentin prosperi** (sept. 2009) "Labour Relations In The Construction Industry" a case study from Delhi.