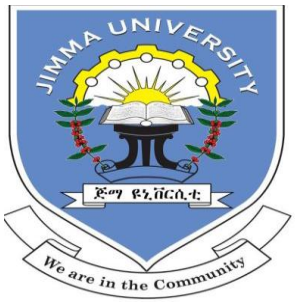

JIMMA UNIVERSITY

JIMMA INSTITUTE OF TECHNOLOGY

SCHOOL OF POST GRADUATE STUDIES

FACULTY OF CIVIL AND ENVIRONMENTAL ENGINEERING

CONSTRUCTION ENGINEERING AND MANAGEMENT CHAIR

EFFECTS OF HUMAN RESOURCE MANAGEMENT PRACTICES ON CONSTRUCTION PROJECT PERFORMANCE IN JIMMA TOWN

A Thesis Submitted to School of Graduate Studies, Jimma University, Jimma Institute of Technology, Faculty of Civil and Environmental Engineering in Partial Fulfillment of the Requirements for the Degree of Master of Science in Construction Engineering and Management

By

Dechasa Dasalo Shone

January, 2021

Jimma, Ethiopia

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Advisor: Dr. Getachew Kebede Signature……

Co-advisor: Eng. Abay Legesse Signature……

January, 2021

Jimma, Ethiopia

DECELARATION

I, the undersigned, declare that this thesis entitled ‘‘effects of human resource management practices on construction project performance in Jimma town’’ is my original work, and has not been presented by any other person for an award of a degree in the Ethiopia or any other university.

Dechasa Dasalo Shone _____ _____

Name Signature Date

As research Adviser, I hereby certify that I have read and evaluated this thesis paper prepared under my guidance, by Dr. Getachew Kebede entitled ‘‘EFFECTS OF HUMAN RESOURCE MANAGEMENT PRACTICES ON CONSTRUCTION PROJECT PERFORMANCE IN JIMMA TOWN’’ and recommend and would be accepted as a fulfilling requirement for the Degree Master of Science in Construction Engineering and Management.

Advisor: Dr. Getachew Kebede _____ _____

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Co – Advisor: Eng. Abay Legesse _____ _____

Name Signature Date

ABSTRACT

In construction projects, many human resources issues lead to poor project performance such as poor project work design and structure, shortage of qualified skilled employees, changing work force demography, a high rate of employee turnover and high rate of burnout. In order to improve human resource management structure and system in the construction industry, Human Resource Management practices are being developed and implemented as it is vital to the effective functioning and the performance of projects in construction industry.

The main objective of the study was to assess the effects of Human resource management practices on CPP in Jimma town. The study used both primary and secondary data sources. The research tool was a questionnaire and interview. A questionnaire constituted closed ended items and the researcher used likert scale items. Data were analyzed and interpreted using descriptive statistics and inferential statistics based on SPSS version 20 software. Descriptive analysis was used to identify the HRM practices and demographic information used by the construction companies and Pearson correlation analysis was used to determine the relationship of HRM practices with project performance. From a distributed total of 42 questionnaires, a total of 35 professional employees from the project participants responded to the survey. The results show, human resource management practices are identified and analyzed. Based on the Pearson correlation test all the HRM practices have moderate, and strong significant correlation results at a 1% significant level. From the findings, Human Resource Management practices have positive significant relationship with CPP. The main conclusion made here is that human resources management practices are influence on CPP. The study therefore, recommends that the results of the research can provide proof and insights and encourage construction firms to implement effective HRM practices to improve project performance in the future. The report ends with some appendices on the questionnaires and interview questions for construction professional stakeholders.

***Key words**: Human resource management, effects, practices, project performance*

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ABBREVIATIONS

BEM	Behavior Engineering Model
BULS	Bat Ultrasonic Location System
COVID	Corona virus epidemic diseases
CP	Construction Project
CPP	Construction Project Performance
HR	Human resource
HRD	Human resource development
HRM	Human resource management
HRMS	Human Resource Management System
HVAC	Heat ventilation air condition
JIT	Joint investigation team
JTCP	Jimma town construction project
KPIs	key performance indicators
PM	Project management
RFID	Radio frequency identification
RTLS	Real-time location system
SPSS	Statistical package for social science
TPM	Total project management
TQM	Total quality management
UK	United Kingdom
UWB	Ultra-Wide Band

CHAPTER ONE

INTRODUCTION

1.1. Back ground of the study

Human Resource Management can be described as a strategic, integrated and coherent approach to the employment, development and well-being of the people working in organizations. It has a strong conceptual basis drawn from the behavioral sciences and from strategic management, human capital and industrial relations theories. This foundation has been built with the help of a multitude of research projects (Armstrong, 2010).

According to Raymond A. Noe, (2011), Human resource management (HRM) is the policies, practices, and systems that influence employees' behaviour, attitudes, and performance. Many companies refer to HRM as involving "people practices". There are several important HRM practices that should support the organization's business strategy: analyzing work and designing jobs, determining how many employees with specific knowledge and skills are needed human resource planning, attracting potential employees, choosing employees, teaching employees how to perform their jobs and preparing them for the future, evaluating their performance, rewarding employees, and creating a positive work environment. One of the aspects which is crucial in this study is 'Human resource management' (HRM) and 'Human resources' (HR) is replaced with the term 'personnel management' as a description of the processes involved in managing different people in organizations. In short, Human Resource Management HRM means employment of people, developing their capacities, utilizing, maintaining and compensating their services in tune with the job and organizational requirement. Which is also called as Human Resource Planning consists of putting right number of people, at the right place, right time, doing the right things for which they are suited for the achievement of goals of the organization.

The challenges of human resource management practices in construction organizations are misunderstanding among laborers, poor project manager, lack of skilled employee (Othman, Idrus & Napiah, 2012).

Improvement on human resource management is critical to overall productivity and cost effectiveness in the construction industry (Ameh, and Daniel, 2017).

In this age of rapid growth of globalization, many construction firms focus on the effective use of HRM practices to gain competitive advantage to achieve the organization's objectives and ensure optimal performances among the employees. In these recent years, construction organizations have increased emphasis to focus on client and market-markets that brings best values to the clients. The project success rate is a crucial issue to fulfill the needs of the market. In order to fulfill objective, set by the organization to be on competitive edge and market oriented, many organizations intend to improve and reorganize HRM system for the success of the organization (Walyee, 2015).

According to Byars and Rue (2006), HRM is defined as a system of activities and strategies that focus on successfully managing employees at all levels of an organization to achieve organizational goals. Generally, Human Resource Management can be interpreted as a systematic approach planned to manage the workforce by training, motivating, and retaining employees that results in employee and organizational performance through several human resource practices.

In order to improve human resource structure and system in the construction industry, Human Resource Management practices are being developed and implemented as it is vital to the effect functioning and the success of projects in construction industry. Minbaeva et al. (2005), also stated that HRM practices is a set of practices to manage human resources through facilitating the development of competencies that are firm specific, develop complex social relation and generate organization knowledge to sustain competitive advantage.

Human resource management plays a significant role in managing construction projects because it involves high commitment and team work from project team and project manager to ensure success of the project. Loosemore et al. (2003) mentioned that human resources mostly contribute to large portion of costs in construction projects. Therefore, the HRM practices must be properly planned and executed among the employees to increase the effectiveness, productivity and performance of the projects in the construction industry. Due to the competitive and unstable economic market, the construction needs to develop better plan, strategies and practices to ensure the construction projects are successful.

1.2. Problem statement

Construction projects are facing many problems from day to day in their business. One of the problems that have been taken into consideration in this study is human resource management in the construction project. Even though construction uses more manpower in its business activities compared to other project, its human resource management is still inadequate and insufficient. The problem concerning human resource management in the construction project needs to be identified and methods for improvement need to be formulated for the success of the project.

According to Walyee L (2015), unlike other industry, construction industry is mainly project-based or matrix structure. The construction projects have the general characteristics of limited budget, schedule, and quality standards with a series of complex and interrelated activities. It requires the cooperation of all project participants that includes clients, directors, designers, contractors, constructors, project managers, project team and consultants. There are many human resource issues that will lead to poor performance of construction projects such as poor project work design and structure, shortage of qualified skilled employees, changing workforce demography, a high rate of employee turnover and high rate of burnout.

The common issue that usually happens in the construction industry is the poor project work design and structure that cause potential conflicts and mistakes due to unclear requirements or information not readily accessible. According to Burke (2010), people will manage and perform the project, thus it is essential to develop an organizational structure that can reflect positively on the construction project of the project team, the project tasks, and the needs of the individual. The undeveloped or poor project work design and organization structure that could not determine who will make decision or final say in the project will ruin the project and lead to project failure and decreased profitability.

The shortage of qualified skilled employees is also one of the common issues among the construction firms. “The scarcity of both skilled trades-people and experienced managers will place more emphasis on the need to increase the quality and quantity of training in order to produce more effective and productive workers” (Levy et al., 2000). Therefore, lack of proper screening process, selection methods and poor recruitment procedure will badly affect the success rate of the construction projects and therefore lead to low productivity and growth of the

construction firm. Absence of studies in the areas initiated the researcher to raise the issue under consideration.

1.3. Research Questions

The research question focus on soliciting information on the HRM practices adopted by construction project of Jimma town for effective and efficient management of the companies' human resources. The questions include:

1. What are the practices of Human Resource Management in Jimma town construction projects?
2. What is the relationship between HRM practices with construction projects performance?
3. What are the key HRM factors that affect construction project performance in Jimma town?

1.4. Objectives

1.4.1. General objectives

The main objective of the study was to assess the effect of human resource management practices on construction projects performance in Jimma town.

1.4.2. Specific objectives

1. To identify the human resource management practices on construction projects performance in Jimma town
2. To determine the relationship between human resource management practices and construction project performance in Jimma town.
3. To investigate the key HRM factors that affect construction project performance in Jimma town

1.5. Scope of the study

This study focuses on the effect of Human Resource Management practices on construction projects performance and the study is delimited to building construction projects. The human resource practices for this study purpose is only limited to five variables. These practices are

recruitment and selection, training and development, work design, performance management/appraisal and compensation system. The research involves project managers, contractors, consultants, site engineer, team leader, manager administration & HR, designers, Forman only that undertakes on building construction projects. The study is mainly restricted to contractors of grade one, two, and three in Jimma town building construction project. For the purpose of this study would adopt the descriptive survey research design method and primary data would be collected so as to carry out analysis. The study was carried out in Jimma town.

1.6. Significance of the Study

This study contributed to the literature by critically examining the effectiveness of existing Human Resource Management practices that are currently in practice at Jimma town construction projects. Such as recruitment and selection, performance appraisal, compensation plan and training and development, and what effects they have on the employee, as this is ultimately determine the construction project performance.

The human resource management especially on the construction project will definitely find the recommendations and findings of this work relevant and useful in charting a new course for improved construction project performance, through the utilization of HR tools for human resources management and development. It would also be relevant to the construction company in terms of time, cost, quality and productivity to improving construction projects performance in Jimma town. It would also be useful to those who were carrying out studies in related areas in future. It would serve as a reference material to them. Even, the findings can provide the bases for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.1. Human resource management in construction industry

2.1.1. General overview

Construction Industry is an industry involved in the planning, execution and evaluation of all types of civil works. Physical infrastructures such as Building, Communication and Energy related construction works; Water supply and Sewerage civil works, etc (Beer et al., 1984). Construction industry although is one of the most labor-intensive industries, human resource management (HRM) issues are given inadequate attention (Dainty and Loosemore, 2013). Thus there is a need to redress this issue by examining both the strategic and operational aspects of managing human resources within the construction sector. Yet it has long been recognized that the way employees are managed can have important implications for organizational performance, and can even be a differentiator between successful and unsuccessful organizations (Townsend, Wilkinson, Allan, and Bamber, 2012).

The capability to attract, develop and retain competent employees is a key feature of any successful business. Human in an organization is the most valuable asset and this is especially true in relatively labor-intensive industry such as construction. However, work group also represents the most difficult resource of the organizations to manage. Unlike physical resources, human beings have their own personal needs those must be fulfilled and habit those must be managed by an employer provided they are contributing to organizational growth and development. People being individuals have their own perspectives, values and attributes in the organizational set up and if these are managed effectively human personality can bring considerable benefits to organizations (Mullins, 1999). However, if managed poorly they have the potential to severely limit the organizational growth and threaten the viability of a business. In countries like Ethiopia, there were no many institutions that protect the rights of employee.

There are innumerable examples of conglomerate and project crises in the construction sector that occurs as a result of human behavior and it appears that practices of *human* resources management has the potential to eliminate more risks in the construction than any other

management approach (Loosemore et al., 2000). This paper has mainly focused on human resources management practices in the construction industry.

2.1.2. Human Resource Issues in Construction Industry

Human resource is an important resource in construction because it is the one that combines all the other resources namely materials, plant, equipment, and finance in order to produce the various construction products.

Human resources: -

- Are the most important resources in Construction Industries.
- Are critical in that they significantly influence organizational productivity.
- Operates the machines, design new products and services, make the decisions to spend financial resources, market the products and deliver the services.
- Decide the objective of the Organization

Without effective human resource; it is impossible to achieve organizational objectives.

The human resource issues are the critical in construction industry; the issues influencing human resource are described below by researchers' (yankov, 2001)

Shortage of skilled labours: - Human resources are a vital to all industries, including the construction industries. As claimed by Paul manning, the chief operating officer of the construction firm C, Raimondo & Sons, ''maintaining and quality people is priority'' (Tulacz, 2000).

Modifying labour market: - These changes make human resource management more important to construction industry than ever before. Yet another reason for the importance of human resource management in this industry is the fact that there is a high rate of ''burnout'' among construction workers who find they must put in long hard hours in the course of their daily work (Tulacz, 2000)

HR management theories in the construction field: - Experts in the field of construction worker have developed specific theories regarding the use of human resources management in successful building operations.

Employee motivation: - The key to making such philosophies work is findings ways to motivate workers. Motivation generally seeks to boost employees' morale to work hard and thus increase productivity. Motivation include both extrinsic, such as more pay, allowance, fringe

benefits, and intrinsic such as recognition, appreciation, acceptance by fellow workers, opportunities for promotion, career development and consultation for important matters. Morale on the other hand increases productivity indirectly by reducing absenteeism, accidents, employee turnover and grievances. This means that the workforce can never develop in an organization where there is low morale and lack of motivation because motivation as these leads to job satisfaction, which in turn leads to development (Gale, 1994).

Workers participation: - To encourage worker participation, managers are advised to make use of a system that recognizes and rewards workers who do a good job. For example, construction workers can receive a financial bonus to identifying ways to improve the quality of their company operations (Jahn, 1996).

Some of the major issues of human resource management are hiring the right people, developing the right process, helping employee develop right skill, Motivating and retaining the workforce, creating culture of innovation, and Succession planning (Malkani and Kambekar, 2013)

2.1.3. Concept of Human Resource Management in construction projects

Human resource management considers people's dimension in management since every organization constitute people, acquiring their services, fine-tuning their skills, motivating them to higher levels of performance and ensuring that they continue to maintain their commitment to the organization are prerequisites to achieving organizational objectives (Chukwuka , 2016).

Human resource management has the key role in the today's competitive work environment. The style and management of human resource systems based on employment policy, comprising a set of policies designed to maximize organizational integration, employee commitment, elasticity, and quality of work (Alagaraja, 2013). HRM is defined as a strategic and compatible approach to management of an organization's most approached assets the people working there who one by one and jointly contribute to the accomplishment of its objectives. According to Armstrong, the main aim of human resource management is to provide that the organization can achieve success through people (Armstrong, 2006).

Human Resource Management is the performance of all managerial functions involved in planning, recruiting, selecting, developing, utilizing, rewarding, and maximizing the potential of

the human resources to the achievement of the objectives of an organization. Human Resource (HR) management deals with the design of formal systems in an organization to ensure the effective and efficient use of human talent to accomplish organizational goals. HR practices are the most important tools in order to contribute to increase project performance for companies. Companies can take the leading position with an effective use of human resources to increase productivity and performance under the competitive market conditions. The human resource is the most important factor affecting project performance (Loosemore et al., 2003)

2.1.4. Human Resources Management (HRM) in construction industries

The process of managing the human resources is called Human Resource Management (HRM). HRM is a distinctive approach to employment management which seeks to achieve competitive advantage through development of a highly committed and capable workforce using an integrated array of cultural, structural and personnel techniques (Storey, 2001).

Regarding to Beer et al., 1984 defined Human Resources Management as a strategic approach to the management of Human Resources that involves all management decisions and actions that affect the relationship between the organization and employees. Manpower management focuses on estimating the size of work force, division into functional teams and scheduling the deployment of manpower during various stages of the project. Workforce in construction companies consists of Architects, Engineers (Design and Site), Human Resources, Tendering Team, Accounting Personnel, Drafting Personnel, Labor, Managers(Divisional & Functional), Drivers & Security Staff, Welder, Carpenter, and Bar Benders. Each has its own qualifications, certification, licenses, etc.

The project manager is responsible for organizing, recruiting personnel, planning and controlling the project. The project manager and human resources are having a key role for project success. Traits/skills of a project manager are Team building, Leadership, Conflict Resolution, Technical Expertise, Planning, Organization, Entrepreneurship, Administration, Management, and Resource Allocation (Source HRM @ construction industry from Indian lecture video).

According to Loosemore et al. (2003) stated that, Human resource management has a significant influence in the construction projects. Although construction technologies and management techniques have advanced rapidly, project managers still need to pay attention to people management. Human resources still account for the majority of costs in most construction projects and in construction effects and efficient HRM strategies positively affect costs, schedule and quality at the project level. In construction industry workers are the major backbone of the activities and they are to be given highest priorities (Malkani and Kambekar, 2013)

2.1.5. Human Resource Development in Construction Industry

Neyestani and Behnam (2014) described that Human Resource Development (HRD) is the domain that performs core function in an organization for the advancement of personal and professional skills, knowledge and abilities of employees. Human resource development includes such opportunities as employee training, employee career development, performance management and development, coaching, mentoring, succession planning, key employee identification and organization development. HRD has the key role in improving knowledge and skills on human resource in any organization. HR professionals are very important for the organization. The main target of human resource development is on fostering the workforce so that the company as well as employees can achieve their work goals and objective to maximum satisfaction.

The companies implement a planned development of human resources needed for the company to grow and actively support their employees in the voluntary development of their skills with the aim of achieving growth for both the company and our employees. Nowadays, managers believe that the employees are the most important management resources. Managers are aiming to achieve growth for both the company and employees by actively supporting the growth of each individual employee and developing human resources who are equipped with skills and experience required to work at the organization. Managers approach human resources development from the three areas such as:

1) Planned Human Resource Development which is to implement planned development to foster and secure the human resources needed to achieve the management vision (e.g., growth strategy, business continuity, creation of corporate culture);

2) Skill Development which is tasked to develop on individual employees their skills and increase their market value, and;

3) Career Development which is a continuous lifelong process of developmental experiences that focus on seeking, obtaining and processing information about self, occupational and educational alternatives, life styles and role options support medium to long-term career development and promote growth toward employees' ideals.

Organizations have many opportunities for human resources or employee development, both within and outside of the workplace. Human Resource Development can be both ceremonial as well as casual ranging from classroom training sessions and college course and an organizational scheduled change effort to casual mentoring of subordinates by their superiors. Organizations that intend to grow and become sophisticate utilize an extensive portion of their resources in human resource development. Human resource development is directed towards changing an organization and everyone associated with it from within, in order to gain advantage over its competitors and ultimately achieving great amount of success. It also caters the need for employee talent and skill development within an organization. Talent and skills development are important components of Human Resource Development.

2.1.6. Challenges of human resource management practices on construction projects performance

Project human resource management includes the processes that organize, manage, and lead the project team (PMI, 2017). The human resource need of project management is the biggest challenge of project management practice in the 21st century (Mir and Pinnington, 2014). It is the human resource that plan and execute the project, and ensuring that project teams are competent enough to successfully manage the project to exceed stakeholders' expectation is crucial. Every project has different human resources needs with different skills. Most time it is difficult to get the right employees on the project and this staffing problem may therefore have several implications on the success of the project (Abdulrahman, 2016). This problem may be insignificant due to the mindset that HRM only can be executed over a long period of time instead of a short period of time.

According to Othman I, Idrus A. & Napiah M. (2012) stated that the challenges of Human resource management faced on construction projects are project managers plays an important

role, Lack of communication between personnel and laborers, Teamwork in the construction team is insufficient, Lack of skilled laborers, Training provided is not enough and inadequate, means that no training and development practices, No or lack of evaluation for the personnel and laborers' performance, No or insufficient reward for personnel and laborers with good performance, Duration of projects too short for HRM implementation (1 year, 2 years, and so on)

2.2. Human Resources Management Practices

The HRM practices commonly adopted by various companies were either formal method or informal method or both and some of the issues are regarding the HR functions, employee hiring rules, firing rules, finding sources of new employees, HR plans, training, job description and performance appraisal. It was observed that though most of the companies have a separate department for managing their human resource only few companies follow the formal practices completely. On the other hand, in most company formal HRM systems tend to be under-utilized.
Many researchers investigated on the effects of human resource management (HRM) practices on construction projects performance.
In order to maximize the effectiveness of human resource management, there should have the following aligned activities are strategic human resource management, job analysis, recruitment and selection, training and development, career development, performance management, compensation and benefits, discipline, and safety and health.

Also, Pfeffer (1998) described that HRM activities that promote a sustainable path to competitiveness should involve the following function of Selective recruitment, work design/job design, Training and Development, Compensation system/reward, Performance management, Employee participation, Information Sharing, and Self-management, motivation etc.
Importantly, Manpower planning has become an important management tool for balancing and structuring the skills of the workforce (Gill, 1996). Which is also called as Human Resource Planning consists of putting right number of people, right kind of people at the right place, right time, doing the right things for which they are suited for the achievement of goals of the organization.

2.2.1. Recruitment and selection

In this case sources that company uses as a medium of selection and recruitment of new employees were studied. From the survey it was found that newspaper and institution were the most preferred source for the recruitment. While some company preferred recruiting through walk-ins interviews, job-portals were also used as a source by two companies for recruitment of new employee. The decision for selection of new employee was taken by managing director in most of the company's. (Lynch and Smith, 2010; Cunningham, 1999), recruitment and selection are the initial process to evaluate staff. This is concerned with identification, attraction and selection of the qualified person meeting the job requirements of the organization. It is an important process to carry out otherwise the outcomes inappropriate recruitment and selection is extensive.

Qureshi and Ramay (2006), observe that HR www.wjrr.org practices are positive relationship with employee's performance whereas selection and training is more affecting the performance rather than other practices. Chand and Katou (2007), demonstrate that recruitment and selection, part of HRM system is strongly correlated with the profitability and suggests that management of the organization must focus on these HRM practices (recruitment and selection) resulting in an improved organizational profit. Stewart and Carson (1997), suggest that recruitment practices of the organization must be consistent and coherent with Human Resource Management functions like human resource development, pay, benefits and business strategy of the organization. It is identified that in staffing process, job analysis is a prerequisite for all HR planning, development and utilization activities done by the organization as job analysis plays a vital role in staffing because it clearly shows the particular requirement of the job, position in the structure of the organization and human requirements to perform that job.

Meara and Petzall (2009), discover that questionnaire respondents confirmed that job analysis for the particular task including competence knowledge and experience, undertaken by the HR executives. It is important to consider fit between successful candidate and the organization. Selection criteria are used as basis on the questions asked by selection panel and in interview. Hsu and Leat (2000), reveal that line managers was more involved in the final selection decisions than was indicated for the staffing process as a whole.

As discussed by Jackson et al. (2009), human resource management approaches in any business organization are developed to meet corporate objectives and materialization of strategic plans. The nature of recruitment and selection for a company that is pursuing HRM approach is influenced by the state of the labour market and their strength within it.

Furthermore, it is necessary for such companies to monitor how the state of labour market connects with potential recruits via the projection of an image, which will have an effect on and reinforce applicant expectations. Recruitment is that part of the personnel function that deals with the process of filling a vacancy. The main stages in the recruitment process of professionals are like this; job analysis, job description, attracting applicants and advertising, selection of the right candidates, final assessment and placement (job offer)

2.2.2. Training and development practice

The Oxford English Dictionary defines training as the action of teaching a person a practical skill or type of behaviour in any profession, art or craft. The HRD definitions do not also differ significantly.

According to Swanson and Holton , training and development as a process of systematically developing work-related knowledge and expertise in people for improving performance. In this regard, a training and development effort can further be designed to increase an individual's level of self-awareness, proficiency, skills and motivation to perform his or her job well. Furthermore, training and development are generally considered as a systematic endeavor by an organization to facilitate the learning of job-related behaviour on the part of the employees. Smith (1992), defines the term of training as "a planned process to modify attitudes, knowledge or skill behaviour through learning experience to achieve effective performance in an activity or range of activities". In these definitions, training is defined as a process, and needs the effective ways and methods in order to improve the performance. Furthermore, learning and individuals in organizations have been considered as the key themes of training and development (Russ, Eft P and reskill, 1997).

Training for up gradation of skills and knowledge is the major issue in current scenario due to faster development in the technology. It was observed that many companies do not have specific training module and program for the workforce. It was also discussed about the barrier they are

facing in order to have an integrated training program for skill up gradation. Some of the basic barriers in integrated training program for staff are as follows: Higher expenses of construction training courses, Short term contract of worker, larger number of various type of learning point, little attention of client on the importance of skilled labour in the project, Time consuming process, Lack of initiative among the workers, and Lack of government commitment (Malkani and Kambekar, 2013)

According to Andy Schmitz (2012) stated that, there are several types of training can provide for employees in order to perform their job. In all situations, a variety of training types will be used, depending on the type of job.

- Technical training addresses software or other programs that employees use while working for the organization.
- Quality training is a type of training that familiarizes all employees with the means to produce a good-quality product. The ISO sets the standard on quality for most production and environmental situations. ISO training can be done in-house or externally.
- Skills training focuses on the skills that the employee actually needs to know to perform their job. A mentor can help with this kind of training.
- Soft skills are those that do not relate directly to our job but are important. Soft skills training may train someone on how to better communicate and negotiate or provide good customer service.
- Professional training is normally given externally and might be obtaining certification or specific information needed about a profession to perform a job. For example, tax accountants need to be up to date on tax laws; this type of training is often external.
- Team training is a process that empowers teams to improve decision making, problem solving, and team-development skills. Team training can help improve communication and result in more productive businesses.
- To get someone ready to take on a management role, managerial training might be given.
- Safety training is important to make sure an organization is meeting OSHA standards. Safety training can also include disaster planning.

2.2.3. Work design practices

Job design (also referred to as work design or task design) is the core functions of human resource management and it is related to the specifications of contents, methods and relationship of jobs in order to satisfy technological and organizational requirement as well as the social and personal requirements of the job holder or the employee. Its principles are geared towards how the nature of a person's job affects their attitudes and behavior at work, particularly relating to characterizes such as skill variety and autonomy. The aim of job design is to improve job satisfaction, to improve through-put, to improve quality, and to reduce employee problems (examples; grievances, absenteeism). Job design can be defined as "the specification of the contents, methods, and relationships of jobs in order to satisfy technological and organizational requirements as well as the social and personal requirements of the job holder" (Armstrong, 2003).

According to another definition, job design "is the functions of arranging task, duties and responsibilities in to an organizational unit of work" (Ali and Aroosiya, 2012). Job design should start with an analysis of task requirements, namely what should be done, and then it should take into account the following motivating characteristics: autonomy, responsibility, discretion, and finally self-control (Armstrong, 2003). Job design is concerned with structuring jobs in order to improve organizational efficiency and employee satisfaction.

The design of job should be reflect both technologies and human considerations. It should be facilitate the achievement of organizational objectives and the performance of the work that the job was established to accomplish.

Three of the main job design techniques that discussed in this paper are job rotation, job enlargement and job enrichment. Job rotation enables the development of the employees' skills, their organizational retention, reduces job boredom, while at the same time it controls the work-related musculoskeletal disorders and reduces the exposure of workers to work-related injuries. Job enlargement adds more tasks to the existing tasks of the employee, thus increasing employee participation in the decision-making process. Job enrichment makes jobs more challenging and interesting and also enables the participation of employees in the decision-making process.

Advantages of job design

- Job Satisfaction

- Motivation of Employees

Motivation theories are linked to job satisfaction.

In fact, job design is an effective tool for the enhancement of employees' job satisfaction, motivation of workers, and ultimately the increase of employees' performance and productivity.

Therefore, Techniques of job design are: job rotation/flexibility, job enlargement/increasing the employees' autonomy over the planning and execution of their own work, leading self – assigned responsibility, scientific management, work reform.

2.2.4. Compensation system practices

Compensation is a systematic approach to providing monetary value to employees in exchange for work performed. Compensation may achieve several purposes assisting in recruitment, job performance, and job satisfaction. Compensation is a tool used by management for a variety of purposes to further the existence of the company. Compensation may be adjusted according the business needs, goals, and available resource. Compensation may be used to: Recruit and retain qualified employees, Increase or maintain satisfaction, Reward and encourage peak performance, Achieve internal and external equity, Reduce turnover and encourage company loyalty, and Modify (through negotiations) practices of unions (Sheila Wambui Njoroge & Josephat Kwasira, 2015)

Factors affecting compensation system are:

1. **Productivity of workers**: to get the best results from the employees and to increase the productivity compensation has to be productivity based.
2. **Ability to pay**: it depends up on the employer's ability to pay wages to the workers. This depends up on the profitability of the firm.
3. **Government**: government has also fixed the rules for protecting the interest of the employees.
4. **Labour union**: also helps in paying better wages to the works
5. **Cost of living**: wages depends up on the cost of living if it has high wages will also hike.
6. **Demand and supply of labour**: it is one of the important factors affecting wages. If demand of labour is more they will be paid high wages otherwise vice versa. If supply of the employees is more than they will be paid less and vice versa.

7. **Prevailing wages rate**: wages also depends on the prevailing wages rate as the organizations have to pay accordingly to keep the employs with them (Jamilu, 2016).

2.2.5. Performance Management practices

Performance management is the process of planning performance, appraising performance, giving its feedback, and counseling an employee to improve his performance. Performance Management in Construction sector like all the other sectors was influenced by global changes occurred in the recent years due to developing technology and becoming business environment more competitive. Many reports were published by a number of researchers (Andersen et al., 2000; Braam, Nijssen 2004; Bassioni et al., 2004; Beatham et al., 2004, 2005; Barad, Dror 2008; Yang 2009) on the lack of an effective performance technique for the industry (Vukomanovic & Radujkovic (2013).

Construction companies in United States of America (USA) also reported a drop in their performance (Yasamis et al., 2002). At the same time, Egan‟s report was published by United Kingdom (UK) government in (1998) that clarified the main goals behind the improvement processes for construction organizations. The reports and researches that published in the field show that improvements are must within construction to solve the current problems exist in the industry. Neely (1999) described that for an actual improvement within the construction companies and gaining the capability of making strategic decisions, it is important for companies to perceive that what should they improve and why should they improve, and they should also recognize their position in the business environment. As a result of understanding the significance and importance of measuring performance for construction organizations, a new topic in academic and practice life were raised for assessing and evaluating organizational performance.

After this revolution in the management field, many new terms were introduced to the literature as performance measures, key performance indicators (KPIs), project performance, project success, project failure, critical success factors, company performance, project performance, performance drivers, performance results, and success criteria. However, a large portion of these advancements were in manufacturing phase, but developing technology, and shortage of a good

PM technique were acted as an effective factor in pushing construction industry towards exploring new methods and models for improving performance.

In construction industry, the performance of projects was considered as central in performance measurement (Alarcon & Ashley, 1996). Furthermore, for the purpose of evaluating the project performance some traditional measures were used as time, cost, and quality that are meanwhile the main objectives of clients (Smallwood & Venter, 2001). Performance management is the supervision and oversight of employees, departments, and organizations with the objective of seeing that milestone or goals. Performance management relies on the analysis of how an organization's employees have historically accomplished task in an effort to improve future performance. Effective performance management systems enable an organization too objectively and systematically rate employee performance, while providing the tools necessary to take that performance level and equate it to compensation actions.

2.3. Factors influencing HRM practices on construction projects performance

The success of any construction projects depends on the factors influencing human resource productivity and its overall impact on the project (Dr. V.J. Sivakumar, 2017). The productivity of any project relies mainly on labour force as labour play an integral part in the success of the project. Although there are numerous lists of labor factors from different groups, most are very common to many lists and carry a similar range of impacts on labor productivity. Those are: Documentation, Technical, Management, Resources, Safety, and Wages etc.

According to a model by Noe et. al. (2010), educational-human capital, economic system, and political-legal system are also important factors affecting the HRM practices in Thailand. For example, in Thailand there is the lack of unskilled or trained workers, increased immigrant workers whose language has become the obstacle for effective communication. Thai political system can also affect the management of human resources. For example, government policies, especially those related to workforce such as minimum wages may pose some financial risks to the management of labor cost, which represents a significant proportion of cost structure of most manufacturing corporations in Thailand.

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 **(**Abhishek, 2017).

a. Physical Factors

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

b. 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.

c. 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.

d. Organizational Factors

Quality of work is good/maintained infirm. 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.

e. 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 labor. The project manager and the site supervisor should always maintain the site condition in a good manner.

f. Design Factors

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

g. 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 and also lack of required construction materials.

h. Equipment Factors

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

i. Project Factors

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

j. External Factors

Political / Governmental problems and often aroused in 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. And also advance in HR technology. Above factors are studied and analyzed for their impact on human resources.

2.4. Impacts of human resource Management Practices

According to human resource management functions, Impacts of manpower Management Practices are grouped into four major areas: -

1. Human resource management functions effect on project time, cost and quality
2. Manpower problems by shortcoming of labour management practices
3. Factors on increasing man power productivity and
4. Factors on reducing manpower productivity (Noe et. al, 2010).

Additionally, according to Nay, and Aye, (2014) factors affecting HRM practices on construction project are assembled as below:

1. *Human resource Management Functions effect on Project Time, Cost and Quality are* Manpower Planning, Recruitment, Selection, Training and Development, Motivation, *and* Safety and Health at work.
2. Manpower Problems by Shortcoming of Labour Management Practices are unfair wages, Recruitment of unskilled personnel, Poor communication, Lack of motivation, Lack of training; don't use safety equipment in work, Lack of safety knowledge and training, poor

teamwork, Absenteeism of construction workers at work sites, Misunderstanding between workers, Lack of labour safety, and increasing child labour.

3. Factors on Increasing Labour Productivity by Good Labour Management Practices are Good management of the workers, Gook working disciplines, Satisfaction at work, Recognizance to labour, Facilities at workplace (availability of materials and equipment's), Good relation with working community, Bonus, Good health & safety condition, Good relation between labour, and High amount of payment
4. Factors on Reducing Labour Productivity by Poor Labour Management Practices; Those factors are Poor skill workers, The workers are not satisfied, Poor or no supervision method, Poor management of project manager, Misunderstanding between worker, Unqualified training for workers, Working overtime, Difficulty with recruitment of workers, Foremen change, New workers, Low leadership skill of project engineers, and Inspection delay

2.5. Project Performance

The main indicators of performance in construction projects are consist of cost, time, and quality (Pinto and Slevin, 1988). They are highly interconnected and need some trade- off and balance among them to reach overall control over the project performance. The concept of project performance has been a subject of utmost concern to most stake holders in construction industry. Projects are expected to perform to achieve set objectives. Satisfactory achievement of the set objectives makes a project successful. Project performance is the totality of time, cost, and quality performance of a given project.

The success of a construction depends on its performance, which is measured based on timely completion, within the budget, required quality standard and customer satisfaction. Currently, organizations have been faced with a great deal of competition which continues to incorrectly; organizations have been faced with a great deal of competition which continues to increases day by day. HR managers must therefore be on the constant look out for ways to maximize the utilization of human resources for improving project performance (Pinto and Slevin, 1988).

2.5.1. Cost Performance

Project cost performance is used to show whether the project adhere to the agreed budget (Cheung et. al., 2004). It is importance because resources are often limited and cost overruns are to be avoided. Project cost performance according to Odediran, (2012) is measured in terms of cost overrun i.e. final; sum minus initial contract sum divided by the initial contract sum multiplied by 100. According to Kometa, Olowolaiye & Harris project with percentage cost overrun above 20% is regarded as a poor project in terms of cost performance project that lie between 10% and 20% regarded as average project. To improve cost performance, developing human resources in construction industry, effective strategic planning, proper project planning, frequent progress meeting, clear information and communication channels.

2.5.2. Time Performance

The success of the performance mainly is an indicator of a success of any construction project. There has been many researches done that circulate about the performance of construction project. Regarding to Chan and Kumaraswamy (2002), the construction time is becoming more important because it is a vital benchmarking for assessing the project performance the organization's project efficiency. Time is one of the most basic criteria to determine a project success. Unfortunately, most constructions industry in Malaysia has been recognized as industries that are facing poor performance that will lead to failure in achieving effective time performance. Because of this, many projects faced a delay in big amount of time.

Mitigation measure to improve time performances are proper planning work, committed leadership and management, send clear and complete message to worker to ensure effective communication, hire skilled workers to achieve good progress, avoid poor quality of work, more rectification and double handling, training and development of all participants to support delivery process.

2.5.3. Quality Performance

The achievement of cost and time are the aspects that project management attends most of the time, resulting in the half- hearted effort to make quality of the project as one of the most important factor for project success. The quality is often overlooked while achieving the objectives of time and cost in a project. Even there are many studies that have been done

showing that quality is very important in a project; they are sacrificed in order to achieve a short-term objective. The control of the performance of installation, building or engineering arrangement should be managed in the same way as how time and cost is managed (Barnes, 1987).

Currently, organizations have been faced with a great deal of competition which continues to incorrectly; organizations have been faced with a great deal of competition which continues to increases day by day. HR managers must therefore be on the constant lookout for ways to maximize the utilization of human resources for improving project performance. HR managers must therefore be on the constant look out for ways to maximize the utilization of human resources for improving project performance.

2.6. The relationship between human resource management (HRM) practices and project performance

Acquaah indicated that HRM practices advance project effectiveness and performance by attracting, identifying, and keeping employees with knowledge, skills, and abilities, and acquiring them to behavior in the manner that will support the mission and aims of the organization. In this way, the effectiveness of HRM practices depends on how it encompasses the appropriate attitudes and behavior in employees, in addition to its implementation (Acquaah, 2004).

Currently, organizations have been faced with a great deal of competition which continues to increases day by day. Human resource managers must therefore be on the constant lookout for ways to maximize the utilization of human resources for improving project construction performance (Muneer M, 2017).

Generally, the relationship between human resource management (HRM) practices and project performance are described in below figure.

The proposed model investigating the relationship between HRM practices and project performance is provided in Figure. 1:

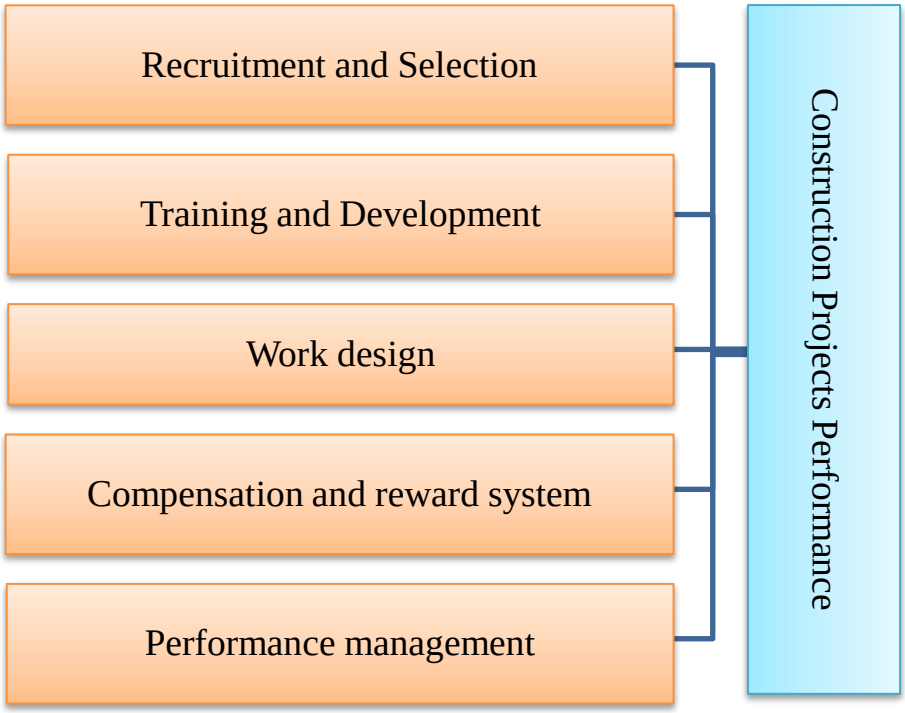


Figure 1: HRM practices Conceptual framework

The purpose of HRM practices is to provide eligible employees for organizations in order to increase project performance and effectiveness. The success of a construction depends on its performance, which is measured base on timely completion, within the budget, required quality standard and customer satisfaction. Project performance includes revenue growth, profit growth, market share, satisfaction, & quality.

Cania (2014), emphasized on the alliance of HRM and organizational policy. The accelerated pace of changes in this domain calls for more wide ranging HR polices. These polices should cover the areas of recruitment and selection, training and development, work design, compensation, and performance appraisal. It is anticipated that with effective policies in practice, organizational performance will be enhanced, and rewards will encourage employees to improve their performance, and this in turn will improve the performance of the organization.

The human resource management practices; training and development, recruitment and selection, work design, compensation and rewards, and performance appraisal have positive significant relationship with construction project performance. HRM have been considered as the main source of sustainable competitive edge for the organization, and this research was significantly contribute to provide new promising HRM framework that was tend to improve project performance in construction industry.

2.7. Effects of human resource management practices on construction projects performance

2.7.1. Selective recruitment

Performance is an increasingly important issue for all business enterprises in developed and developing economies in both public and private enterprises. Organizations are however not exempted from the necessity of performance as they are continually threatened by increase competition resulting from the increasing liberalization of the global economy. Individual performance is topical issue in today's business environment, to the extent that organizations go to the length to appraise and manage it (Armstrong and Barron, 1998).

Performance as defined by Hellriegel et al. (1999) is the level of an individual's work achievement after having exerted effort. Hayward (2005) stated that, individual performances a product of ability multiply by motivation. With environmental factors influencing performance primarily through the effect of individual determinants of performance ability and motivation. This is made possible by the use of selection criteria as basis on the questions asked by the selection panel and in interview. By selecting the required candidates for positions in respective departments, line managers could help achieve a better fit between job and candidate (Zhuand Dowling, 2002). Other researchers Terpstra and Rozell (1993) have found a positive relationship between the extensiveness of recruiting, selection test validation and the use of formal selection procedures and firm profits. Other studies have shown that implementing an effective staffing process is positively related to organizational performance (Syed and Jama, 2012).

Koch and McGrath (1996) also found that sophisticated recruitment and selection procedures are positively related to labor productivity as cited in (Asiedu-Appiah et al., 2013). According to Foot and Hook (1996), the primary aim of the recruitment and selection processes is to ensure

that the best applicants are appointed into positions. This implies that the recruitment and selection processes can assist in predicting applicants‟ future performance and the period the applicant will stay as an employee. As evidenced, human resources should be partners in strategic planning to determine the types of skills and competencies that are required to achieve objectives (Cascio, 1991). Inappropriate selection decisions also reduce organizational effectiveness, invalidate reward and development strategies, and are frequently unfair on the individual recruit and can be distressing for managers who have to deal with unsuitable employees". Recruitment and selection is very important for the survival of every organization but that does not end there, new recruit need to be develop and appraised from time to time in order for them to be abreast with new trends and challenges. When employees are developed it help increase their performance and sustain the growth of the organization. Poor recruitment practices and recruiting poor performing employees can have several negative effects on the organization some of which are stated below:

- Employees with limited role specific capabilities take time to become productive and need more training to build their skills, good employees hit the ground running and are interested in learning
- Underperforming staff also affect the performance of many by a multiplier effect.
- People who are not a good fit to the role require more time and attention from their manager. The time that managers spend on developing their best people is reduced
- Higher human resources cost may arise as a result of time spent in recruiting poor performing employees;
- Client satisfaction is impacted through an increase in errors, poor decision making and less effective client services;

According to Lynch and Smith (2010); Cunningham (1999), recruitment and selection are the initial process to evaluate staff. This is concerned with identification, attraction and selection of the qualified person meeting the job requirements of the organization. Qureshi and Ramay (2006), argue that HR practices are positively correlated with the profitability and suggest that management of organization must focus on these HR practices (recruitment and selection) resulting in improved organizational profit. In order to get maximum output from employees, it is important to consider a fit between successful candidates and the organization".

2.7.2. Training and development

Tzafrir (2005), postulate that Employee Training is an important element in producing the human capital. Investing in employee training programs can make employees feel indebted to the company thereby increasing his loyalty. Training is necessary for the employees to perform. Specialized jobs require specialized skills and knowledge by which the job is much easier to perform as it is in the benefit of the employee. Qureshi et al. (2007) conclude that training as an HR practice has a very positive impact on the performance of the employees as there is highly positive correlation is found in the study.

Danvila Del Valle et al. (2009) suggested that training provides employees with the skills, abilities and knowledge required by the position. In light with the present research during the development of organizations, employee training plays a vital role in improving performance as well as increasing productivity (Muneer, 2017)

This effect can be explained in a way that the organization is interested in investing in training for the employees and giving them confidence and intends to count on them in future, they will make more effort and give their best at their work in an effective way.

According to Malkani, Kambekar (2013) stated that "At present major changes are occurring in the nature of construction work. Nowadays it is a production –oriented industry requiring the minimum of on- site working of materials and an increase in installation and fixing of elements with greater use of mechanical aids and machine. The changes in manpower have led the industry to begin a re- assessment of its occupational structure and the traditional basis of training. Bering this in mind makes all the more important for the industry to develop a soundly based education and training programmes. When applying this programme, they are in direct outcomes:

1. Better quality is often quoted as a benefit of improved training methods
2. Training can reduce waste, increase output, reduce equipment maintenance and improve quality.
3. Proper training is safe work methods significantly reduce accident.
4. Dissatisfaction complaints absenteeism and turnover can reduce when employee are so well trained.

5. Also motivates employees to work hard"

Training and development may be related to firm performance in many ways. Firstly, training programmes increase the firm specificity of employee skills, which, it turns, increases employee productivity and reduces job dissatisfaction that results in employee turnover.

2.7.3. Job design

Job design (also referred to as work design or task design) is the core functions of human resource management and it is related to the specifications of contents, methods and relationship of jobs in order to satisfy technological and organizational requirement as well as the social and personal requirements of the job holder or the employee. Its principles are geared towards how the nature of a person's job affects their attitudes and behavior at work, particularly relating to characterizes such as skill variety and autonomy.

The aim of job design is to improve job satisfaction, to improve through-put, to improve quality, and to reduce employee problems (examples; grievances, absenteeism). Job design principles can solve problems such as work under load or overload, repetitiveness, limited control over work, delays filling vacant positions, increase in working hours, and limited understanding of the job process. Managers try to design jobs in a way that they are behaviorally, and economically realizable for workers as well as the organization. Job design is affected by environmental, organizational and behavioral factors. A proper designed job makes it increase productive and satisfying. The outcomes are: Motivation, Performance, Satisfaction, Reduce absenteeism, and Turnover (Berry, 1997).

According to Ali and Aroosiya (2012) 'job design is an effective tool for the enhancement of employees' job satisfaction, motivation of workers, and ultimately the increase of employees' performance and productivity".

2.7.4. Compensation and reward

Compensation is a tool used by management for a variety of purposes to further the existence of the company. Compensation may be adjusted according the business needs, goals, and available resource. Compensation may be used to: Recruit and retain qualified employees, Increase or maintain satisfaction, Reward and encourage peak performance, Achieve internal and external

equity, Reduce turnover and encourage company loyalty, Modify (through negotiations) practices of unions (Amha Temeche, 2019).

Recruitment and retention of qualified employees is a common goal shared by many employers. To some extent, the availability and cost of qualified applicants for open position is determined by market factors beyond the control of the employer. While an employer may set compensation levels for new hires and advertise those salary ranges, it does so in the context of other employers seeking to hire from the same applicant pool. Morale and job satisfaction are affected by compensation. Often there is a balance (equity) that must be reached between the monetary value the employer is willing to pay and the sentiments of worth felt be the employee. In an attempt to save money, employers may opt to freeze salary levels at the expense of satisfaction and morale. Conversely, an employer wishing to reduce employee turnover may be seeking to increase salaries and salary levels. Compensation may also be used as a reward for exceptional job performance. Examples of such plans include: bonuses, commissions, stock, and profit sharing, gain sharing.

Thus, since that time, compensation was considered by organizations as vital in modifying their tradition or culture, and in enhancing employee's commitment towards achieving high productivity (Needle, 2004).

2.7.5. Performance management

Projects of construction companies often experiences poor performance in terms of cost, overruns, quality defects, delay and time. The reasons of poor performances have often been examined and analyzed. Few studies have been conducted to assess the influence of project performance indicators on project success in construction. Nitschke (1995) posits that performance management is the systematic process by which an agency involves its employees, as individuals and members of a group, in improving organizational effectiveness in the accomplishment of agency mission and goal.

Regulatory requirements for monitoring performance includes, conducting process reviews with employees where their performance is compared against their elements and standards (Heath field, 2011). Continuous monitoring provides the opportunity to check how well employees are

meeting predetermined standards and to make changes to unrealistic or problematic standards, and by monitoring continually acceptable performance can be identified at any time during the www.wjrr.org appraisal period and assistance provided to address such performance rather than wait until the end of the period when summary rating levels are assigned. Developing in this instance refers to the increase in the capacity to perform through training, giving assignments that introduce new skills or higher levels of responsibility, improving work processes or other methods.

Providing employees with training and developmental opportunities encourages good performances strengthens job-related skills and competencies and helps employees keep up with changes in the workplace, such as the introduction of new technology. Carrying out the process of performance management provides an excellent opportunity to identify to development needs. During planning and monitoring of work, deficiencies in performance become evident and can be addressed.

Areas for improving good performance also standout and action can be taken to help successful employees improve event further, (Nitschke, 1995). Rating On a periodic basis, organizations must find it useful to summarize employee performance. This can be helpful for looking at and comparing performance over time or among various employees. Organizations need to know who their best performers are. Within the context of formal performance appraisal requirements, rating means evaluating employee or group performance against the elements and standards in an employee's performance plan and assigning a summary rating of record. The rating of record is assigned according to procedures included in the organization appraisal program. It is based on work performed during an entire appraisal period. The rating of record is assigned according to procedures included in the organization appraisal program. It is based on work performed during an entire appraisal period. The rating of record has a bearing on various other personnel actions such as granting within-grade pay increases and determining additional retention service credit in a reduction in force. Its worthy of note that although, group performance may have an impact on an employee's summary rating. A rating of record is assigned only at an individual not to a group.

Regarding Heath field (2011) believes that rewarding refers to recognizing employees, individually and as members of groups, for their performance and acknowledging their contributions to the agency's mission. A basic principle of effective management is that all behavior is controlled by its consequences. These consequences can and should be both formal and informal and both positive and negative. Good performance is recognized without waiting for nominations for formal awards to be solicited. Recognition is an ongoing, natural part of day to day experiences. A lot of the actions that reward good performance like saying thank you - don't require a specific regulatory authority. Nonetheless, awards regulations provide a broad range of forms that more formal rewards can take, such as cash, time off, and many nonmonetary items.

The regulations also cover a variety of contributions that can be rewarded from suggestions to group accomplishments. However, today's employee performance improvement recognizes the "Hygiene factor" fair pay, reasonable benefits, clean and safe working conditions. These are very important in improving employee's performance for the realization of organizational objectives managing performance effectively; In effective organization, managers and employees have been practicing good performance management naturally all their lives, executing each key component process well. Goals are set and work is planned routinely. Progress toward those goals is measured and employees get feedback. High standards are set, but care is also taken to develop the skills needed to reach them. Formal and informal rewards are used to recognize the behavior and results that accomplish the mission. All five components possess working together and supporting each other achieves natural, effective performance management. There are a number of factors, which affect performance. The authors Rummler and Brache have pointed out six variables that affect the job performance namely, barriers, performance expectations, consequences, feedback, knowledge/skill, and individual capacity.

Thomas Gilbert's Behavior Engineering Model (BEM) includes the following, which affects the performance namely: Data and information, Resources, tools and environmental supports, Consequences, incentives and rewards, Skills and knowledge, Individual capacity, and Motives.
Throughout the last two decades a number of industries, primarily manufacturing, have introduced new methods and techniques to shift traditional paradigms in order to improve their performance. This has led to the creation of new philosophies such as concurrent

engineering/construction, lean production or construction and many others such as JIT, TQM, and TPM etc.

According to researchers' journal, performance measurement is the process of determining how successful organizations or individuals have been in attaining their objectives and strategies.

2.8. Modern human resource management techniques on construction industry

Present day Human Resource Management System interconnects human resource management and information technology for the reduction of the workload of managers and automates their administrative activities. HRMS helps firms improve organizational behavior on staff commitment, competency, flexibility and staff performance (Koch, McGrath, 1996)

Adewole, Oluwole, and Gabriel (2016) stated that the latest methods of HRM software are using RFID and RTLS human resource monitoring system attain by researchers. This RFID web data base use to controlling the personnel by using PDA, GPS. Real Time Location System (RTLS) based approach was used for accurate and reliable estimation of the distance and coordinate location of personnel at any instant.

The modern human resource management practices techniques are stated according to researchers: According to Mishra, Crampton Electronic monitoring of personnel is the computer-based collection, storage, analysis and reporting of information about personnel' productive activities. Businesses have capitalized on Call Monitoring (CM), Video Surveillance (VS), Computer Monitoring (CM) and Real-Time Location Tracking System (RTLS) for the advancement of technology to promote electronic-based monitoring and controlling of employees performances. Call monitoring involves listening to live phone calls and recording one's observations.

This technique is usually useful for monitoring employees who are in the customers' relations department and help desks of organizations. Video surveillance is the viewing of employees through the use of various video cameras that are located in plain sight or secretly hidden from the employees and it is used where there is no reasonable expectation of privacy (Turk, 2004). Computer-based monitoring is the use of computerized systems to automatically collect information about how an employee is performing his or her job (George, 2014).

Computer-based systems have been developed for monitoring employees' personal use of the email, certain key strokes a worker may hit, the errors made and the time and length of internet access (Kidwell, Xenakis, 2014).

Real-time location system (RTLS) is a local positioning system that tracks, identifies and collects (passive or active) the location of objects in real time. It uses simple, inexpensive badges or tags attached to the objects to receive wireless signals to determine their locations. Existing RTLS solutions include GPS based location tracking (mostly used for outdoor sensing), Bat Ultrasonic Location System (BULS) (which uses radio transceiver, controlling logic and an ultrasonic transducer to function) and Cricket Location Support System (which uses a combination of Radio Frequency (RF) and ultrasound technologies to provide a location-sensing solution). Others are Wireless LAN, which pervasively emits a signal that is picked up by access points) and Ultra Wide Band (UWB), which is one of the recent works in field of RTLS (Dardari, 2010).

RFID-based systems for monitoring employees at duty posts are proposed. The systems are geared towards increased productivity but suffer in the area of implementation which restricts the establishment of their versatility. RFID technology was also used for accurate and speedy inventory and asset tracking. The system was not designed to run on networked and internet environments (Pagnattaro, 2013).

The new system is equipped with facilities for online tracking, detailed movement statistics and passive RFID technology which ensure its relative advantage over similar systems through its simple, less bulky and power efficient capabilities. In view of the fact that some jobs require regular movement of personnel, future research therefore focuses on the development of a new technique for tracking of personnel whose duties cut across offices or buildings. Consideration will also be given to the integration of GPS, and RFID technologies to achieve greater purpose for outdoor and long distance monitoring.

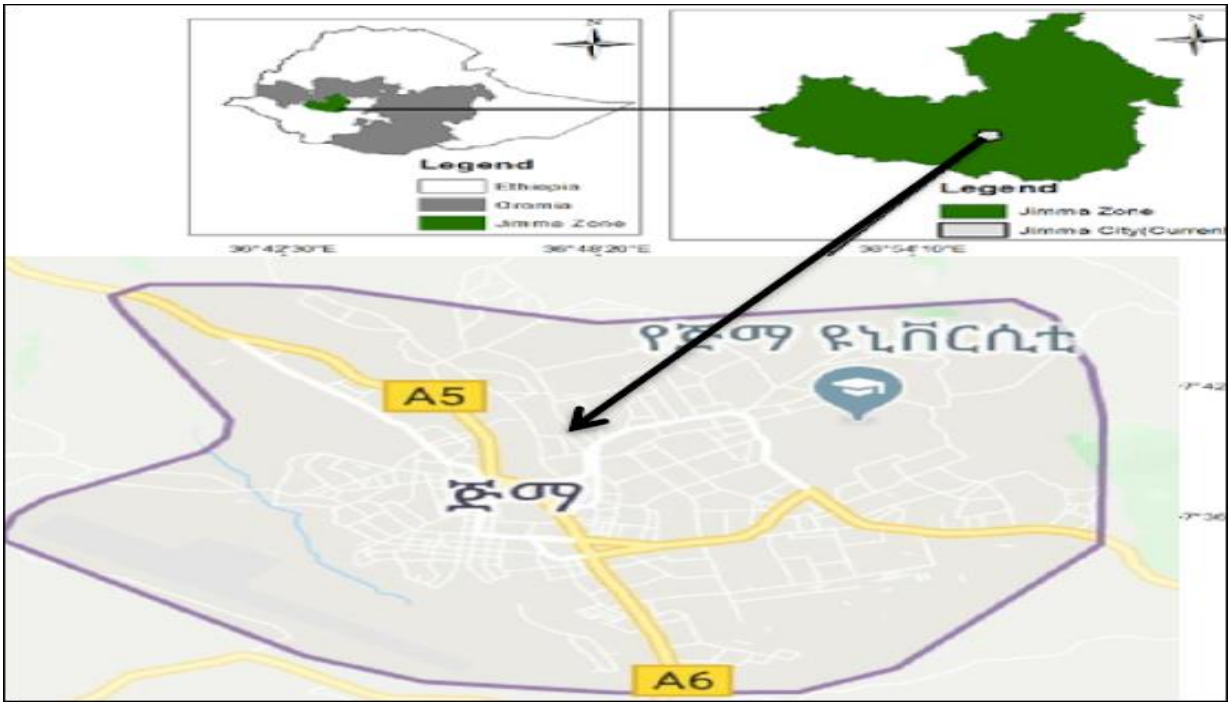
CHAPTER THREE

RESEARCH MATERIALS AND METHODOLOGY

The primary focus of this chapter is to provide an overview of the research methodology used to investigate the research problem. It covers the research design, source of data, sampling method, data collection procedure, and methods of data analysis about the practice of Human Resource Management on construction projects performance in Jimma town.

3.1. Study area

The study was conducted in Jimma town, which is found in southwestern Ethiopia located 335km southwestern from the capital city of Ethiopia Addis Ababa. Jimma is the largest town in southwestern Oromia. It is a special zone of the Oromia region and surrounded by the Jimma zone. It has a latitude and longitude of 7^0 40'N 36^0 50'E and 7.66^0 N 36.833^0 E and the town found an average altitude of about 5840ft or 1780m above mean sea level. The city has a population of about 186,148.



Source @ Google map © May 2020

Figure 3.1: Study area of a research

3.2. Research Design

This study used a descriptive survey research design. The basic research design was descriptive research methodology using both primary and secondary data. Descriptive designs explain phenomena as they exist and are often used to obtain information on the characteristics of a particular problem or issue of human resource management practices effects on construction project performance in Jimma town. The research process was designed by defining the research problems, objectives, and questions. To accomplish these objectives the research was made using the following method

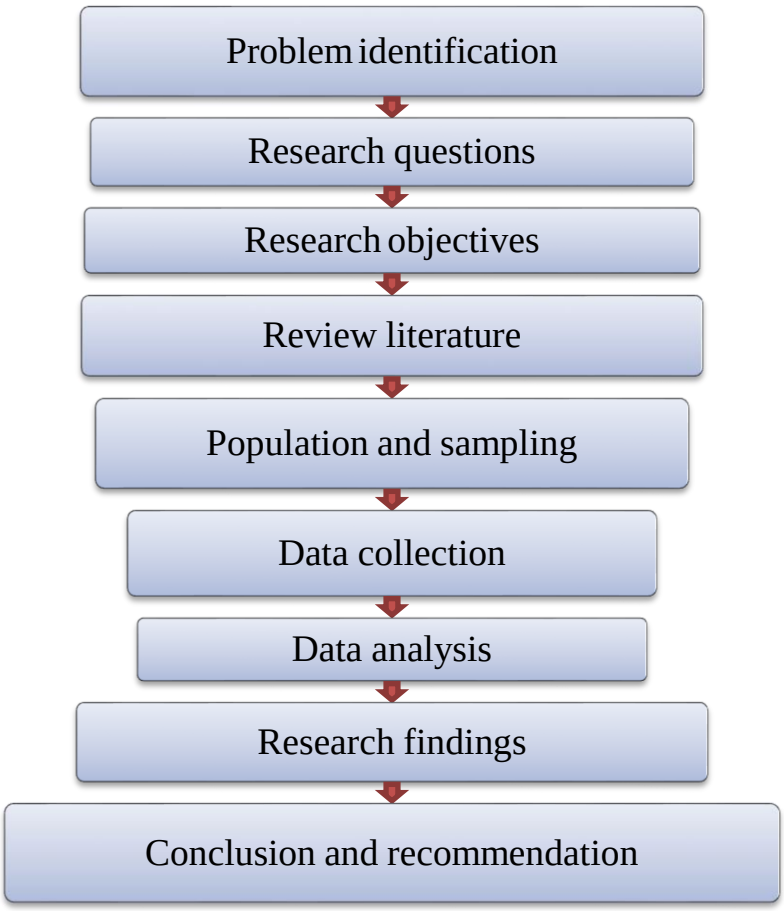


Figure 3.2: Structure of study

3.3. Population and Sample

The target population of the study was professional employees of Building construction projects in Jimma town. The research samples were taken from stakeholders in the construction industry which are project managers, contractors, consultants, and other stakeholders that select depending on their direct exposure to construction activities. Therefore the population of this research was the construction professional workers (employees) who include, project managers, manager administration and HR., designers, contractors, consultants, site engineer, Forman, and team leaders, within Jimma town.

Table 3.1: Respondents population in terms of projects

No	**Projects**	**Respondents population**
1	Jimma town construction project bureau	8
2	Jimma town land management building project	5
3	Gibe office building project	6
4	Jimma bus station building project	7
5.	Jimma telecommunication building project	6
6.	Jimma university administration building project (varnero building project)	6
7	Jimma university guest house building project	4
Total		**42**

As Table 3.1 indicates that, a total of 42 professional employees of construction projects in Jimma town were included in the study using the census method. A census method was carried out due to the small size of the population.

Table 3.2: Population in terms of respondents

No	Professional employees	Number of Respondents
1.	Contractors	9
2.	Consultants	10
3.	Project managers	5
4.	Site engineer	7
5.	Designers	3
6.	Team leaders	3
7.	Forman	3
8.	Manager Administration & H.R	2
Total		**42**

3.4. Sample and sampling techniques

The population size and its characteristics were described in this section. It also discussed the methodology used to define the selected probability sample taking from the population. The major sources of primary information for the study were professional stakeholder's contractors, consultants, project managers, site engineers, team leaders, designers, Forman and manager administration & HR. To perform this study, the first step is to get the total number of the target population.

The study used Jimma town construction projects there were a total number of 42 professional employees. The population of the study was less than 100 professional employees; because of this all of the populations are used as sample size, Means that the number of the population is equal to the sample size.

Therefore, 42 respondents were used as a sample for this study to gather data through a questionnaire.

3.5. Data Collection Tools

The study was used both primary and secondary data in its construction. Primary data were collected mainly through questionnaires of closed-ended. For close-ended question, a five-point Likert scale that ranges from 1 (strongly disagree) to 5 (strongly agree) were employed. The questionnaire was prepared in the English language because it was not a problem for respondents

to understand the questionnaire, taking into account the respondent's level of qualification. In addition to the questionnaire, the researcher collected data through the unstructured interview from the professional stakeholder's project manager, HR manager, site engineer, contactor, team leader to get data about the current human resource management practice of the organization. Secondary data were gathered from published theoretical literature and empirical studies, published books, relevant books, unpublished materials, annual reports, the college rule, and procedures, etc

3.6. Methods of Data Analysis

Based on the nature of the data collected through questionnaires and interview the following procedures and statistical tools were employed. Following the completion of data collection, and data processing was conducted through filtering inaccuracy, inconsistency; incompleteness, and illegibility of the raw data to make analysis very easy. To solve such problems manual editing, coding, data entry, and consistency checking were done. To analyze data both quantitative and qualitative techniques were employed. The data collected from the questionnaire were analyzed through quantitative descriptive statistical tools such as percentages, mean, standard deviation, and frequencies using SPSS version 20.0 computer software. Respondents were asked to rate the human resource management practice on construction projects performance on a five-point Likert scale type ranging from 1 to 5.

(1=strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=strongly agree), and the analysis of the mean score is based on the below assumptions from (Burns, 2008).

- If the mean statistical value is between 0 to 1.5 it implies the respondents strongly disagreed.
- If the mean statistical value is between 1.5 to 2.5 it implies the respondents disagreed.
- If the mean statistical value is between 2.5 to 3.5 it implies the respondents have undecided or neutral.
- If the mean statistical value is between 3.5 to 4.5 it implies the respondents have agreed.
- If the mean statistical value is above 4.5, it implies that the respondents were strongly agreed.

While qualitative data obtained through interviews and documents were analyzed qualitatively. On the other hand, inferential statistics which is the Pearson Correlation analysis tool were used to determine the relationship between HRM practices and CPP because it is a widely used statistical method for obtaining an index of the relationships between two variables when the relationships between the variables are linear.

Hinkle, Wiersma, & Jurs (2003) Cite from Herman proposed the rules of thumb that need to be used in interpreting the R-value obtained from inter correlation analysis, Table3.3.

Table 3.3: Interpreting the R-value for Inter Correlations

Size of correlation (R-value)	**Interpretation (relationship)**
0.90 to 1.00	Very strong positive relationship
0.70 to 0.90	Strong positive relationship
0.50 to 0.70	Moderate positive relationship
0.30 to 0.50	Low positive relationship
0.00 to 0.30	Very low relationship

Source: Hinkle, Wiersma, & Jurs (2003)

The data collected through unstructured interviews were also analyzed qualitatively by descriptive statements. Finally, the results were discussed and interpreted to draw important findings, conclusions, and recommendations.

3.7. Variables of the Study

3.7.1. Dependent variables

The dependent variable of the study is construction project performance (CPP).

3.7.2. Independent variables

The independent variable of this study is the practice of HRM that can influence construction project performance (i.e. recruitment and selection, training and development, work design, performance management, and compensation system) in Jimma town.

3.8. Ethical considerations

The study was conducted by considering ethical responsibility. The necessary approval and permission letter were written and obtained from the university and Jimma town construction projects. The researcher communicated to respondents the purpose and aim of the study and the use of the information as well. Every respondent who participate in the research willingly and was involved in the study was entitled to the right of privacy and dignity of treatment, and no personal harm will be caused to subjects in the research. Information obtained will be held in strict confidentially by the researcher. Moreover, participants will be notified not to disclose their names; and also assured anonymity of data. The following ethical considerations were at the base of this research. a) Fairness. b) Openness of intent. c) Disclosure of methods. d) Respect or the integrity of the individuals. e) Informed willingness on the part of the subjects to participate voluntarily in the research.

CHAPTER FOUR

RESULT AND DISCUSSION

4.1. Response Rate on Questionnaire

As Table 4.1 Shows, the questionnaires were distributed to the professional employees of Jimma town construction projects. Among these employees 9 questionnaires were distributed to contractors of Jimma town construction projects, 10 questionnaires were distributed to consultants of Jimma town construction projects, 5 questionnaires were distributed to project manager, and the remaining 18 questionnaires were distributed to other stakeholders to assess human resource management practices related to the performance of the construction projects. Among contractors, 6(67%) were kind enough to fill the questionnaires properly and return them on time. The rest 3 (33%) were failed to complete and return the questionnaires and consultants 8 (80%) were kind enough to fill the questionnaires properly and the rest 2(20%) were failed to complete and return the questionnaires. Regarding project managers, all 5 respondents were kind enough to fill and return the questionnaire properly.

Table 4.1: Total Number of questionnaires distributed, returned, and unreturned

Employees	Questionnaires distributed	Questionnaires returned	Questionnaires Unreturned	Response Rate
Contractors	9	6	3	67%
Consultants	10	8	2	80%
Project managers	5	5		100%
Other stakeholders	18	16	2	89%
Total	42	35	7	83%

According to Table 4.1, The Position of respondents in the organization is considering the current positions in their construction industry, and their questionnaires returned response rate are; Project manager (100%), Contractor (67%), Consultant (80%), Other stakeholders 89% (site engineer, technical expert, team leader, Forman, and manager administration & H.R respectively respond 91%,100%, 66%, 88%, and 100% percentage).

4.1.1. Descriptive analysis

This descriptive analysis is used to look at the data collected and to describe that information. It is used to describe the demographic factors for more clarification. It is mainly important to make some general observations about the data gathered for general or demographics questions. The demographics factors used in this research are education qualification, work experience, and job position etc. For the scale typed questionnaires for all variables mean or average and standard deviation response of respondents was used. Here the variable under study was an awareness of Human resource management practices, recruitment and selection, training and development, work design, performance management, and reward and compensation were identified and analyzed. Human resources are indispensable assets as well as the livewire of any organization. For the attainment of set goals, every organization must devise adequate, effective, and efficient means of managing its resources.

4.2. Demographic characteristics of the respondents

This part starts with the analysis of the demographic data gathered from the respondents using frequencies and percentages. Accordingly, the general respondent's characteristics including: work experience, educational level, numbers of projects, and role of respondents in construction companies are presented in below tables.

Table 4.2: Period of employment with the company

Years	**Frequency**	**Percentage**
Less than 2 years	9	25.71%
2-5 years	13	37.14%
More than 5 years	13	37.14%
Total	35	100%

The respondents' work experience was assessed, and their experiences in the construction project are indicated in the above table**.**

Table 4.3: Educational background of Respondents.

Educational level	Frequency	Valid percent
Diploma	2	5.71%
BSC/BA	20	57.14%
MSc/MA	12	34.29%
PhD	1	2.86%
Total	35	100%

Above Table 4.3 indicates the academic respondent's qualifications. It is evidenced that the respondents from the case companies hold a range of educational qualifications falling between diploma level, and above degree level.

Table 4.4: Numbers of projects respondents involved

Number of projects	Frequency	Percentage
Less than 3	16	45.71%
3-5	10	28.57%
5-7	4	11.43%
Greater than 7	5	14.29%
Total	35	100%

Table 4.4 illustrates that, the number of project respondents involved in construction companies. The majority of respondents were involved in less than 3 & 3-5 numbers of projects, and smaller numbers of respondents participated in 5-7 & greater than 7 numbers of projects.

Table 4.5: Role of the respondent in the project

Role of the respondent in the project	Frequency	Percentage
Day-to-day supervision of ongoing construction projects	17	48.57%
Design development/Preparation	4	11.43%
Project Monitoring /controlling supervision	4	11.43%
Project Cost planning/budgeting Management	3	8.57%
Overall responsible for construction-related in-coming, in-process, final inspection & testing activities	6	17.14%
Managing human resource, Accountant	1	2.86%
Total	35	100%

Table 4.5 shows that the role of the respondents in construction projects were about 48.57% of most of the respondents are day-to-day supervision of ongoing construction projects, 11.43% others were design development/preparation, and project Monitoring /controlling supervision, 8.57% of project Cost planning/budgeting management, 17.14% of respondents are controlling overall of projects, and also 2.86% were managing human resources in construction projects.

4.3. Analysis of Human Resource Management practices

Based on perceived values of respondent's response to a questionnaire that were modified to represent HRM practices on construction project performance, the analysis of HRM practices on construction project performance is entertained here in below, and the average mean and standard deviation result together with their respective variables was separately presented, analyzed and interpreted as follows:

4.3.1. The analysis of identified Human resource management practices

From responses of respondents view there are five human resource management practices such as recruitment and selection, training and development, work design, compensation and reward system, and performance management are identified, and analyzed by using descriptive statistics.

Table 4.6: Respondent's response on Human resource management practices

NO	Variables	Mean	Standard deviation
1.	Training and development	4.17	0.86
2.	Selection and recruitment	4.14	0.65
3.	Performance appraisal/ management	4.00	0.77
4.	Work design	3.83	0.82
5.	Compensation & reward	3.83	0.79
Average mean and SD value		3.99	0.78

Table 4.6, shows the various practices in construction projects performance, regarding the selection and recruitment; the respondents have a mean value of 4.14 which indicates they are undecided on the company providing an opportunity for all employees to participate in the project. The majority of the respondents also agree with the idea that human resource management practices of training and development practices. Regarding the Performance appraisal/ management, the respondents were agreed on their response.

Generally, regarding the human resource management practices, all of the respondents are decided and the average means value of the variables shows a 3.99 value which implies that the respondents were agreed. Based on above description researcher understood human resource management practices are identified and practiced by some companies in order to achieve construction performance.

As respondent's response on the HRM practices are like recruitment and selection, training and development, work design, compensation and reward, and performance appraisals are identified and described by professional employees of construction project in Jimma town. The human resource management practices are strong influence on construction project in order to give performance in terms of time, cost, quality, and productivity of the works.

Table 4.7: Respondent's response on awareness towards the concepts of HRM

NO	**Awareness towards the concepts of HRM**	**Mean**	**Standard deviation**
1	I am aware of training and development from an HRM point of view	4.03	0.71
2	I know career planning and development as a crucial part of HRM	3.63	0.96
3	I acquainted with organizational development from an HRM standpoint	3.49	0.61
4	I familiar with performance appraisal from an HRM point of view	3.80	0.90
Average mean and SD value		3.74	0.795

Table 4.7, is illustrated awareness towards the concepts of human resource management practices, regarding awareness of training and development from the HRM point of view the respondents have a mean value is 4.03 and 0.71 standard deviation. The career planning and development as crucial parts of human resource management respondents have a mean value is 3.63 and 0.96 standard deviation. As for respondents' level of understanding about training and development, variable majority of the respondents show their agreement with the described statement.

The average mean value of the awareness towards the concepts of HRM respondents has a mean value of 3.74 which implies that the respondents were agreed and 0.795 standard deviations.

From above tables, the awareness towards to the concepts of human resource management practices used to understanding the issues of HRM in construction projects which affects the performance on the construction industries.

4.3.1 Recruitment and selection practices

Table 4.8: Respondent's response to employee perception about recruitment and selection

NO	Employee perception about recruitment and selection	Mean	Standard deviation
1	Recruitment and selection system of Jimma town/your construction project is effective for organizational goal	3.97	0.86
2	Competencies required for different job positions are used in the recruitment process	3.65	0.77
3	The placement of new entrants is done as per the organizational goal	3.77	0.77
4	Regarding internal recruitment, I find the process is effective in identifying the best people for the job	4.11	0.72
Average mean and Standard deviation value		3.87	0.78

Table 4.8 shows, the employee perception about recruitment and selection; regarding Recruitment and selection system of Jimma town construction project is effective for organizational goal, the respondents have a mean value of 3.97 which indicate agree and Competencies required to different job positions are used in the recruitment process have a mean value of respondents 3.65 which indicates agree. The placement of new entrants is done as per the organizational goal, the respondents mean value of 3.77 and also Regarding internal recruitment, I find the process is effective in identifying the best people for the job of respondents have a mean value of 4.11.

The Average Mean Value of the employee perception about recruitment and selection practices of respondents is 3.87, which implies that the respondents were agreed and has 0.78, standard deviation.

The result of study on HRM practices of recruitment and selection as respondents response was the practices is needed in construction project in order to improve the performance of works. As respondents idea this recruitment and selection was of Course practiced and used by some companies to maximize objectives.

4.3.2. Training and Development practices

Table 4.9: Respondent's response on employee perception about Training and Development practices

NO	Variables	Mean	Standard deviation
1	Jimma town construction projects organization are successful in implementing training and development programs	3.20	0.90
2	Jimma town construction projects organization are committed to building the capacity of its employees	3.11	0.78
3	Employees in this organization participate in determining the training they need.	3.17	0.89
4	There are formal training programs to teach new employees the skills they need to perform their jobs	3.00	1.16
5	Employees returning from training are given adequate free time to reflect and plan improvements in the organization.	3.11	1.08
Average mean and Standard deviation value		3.12	0.98

Table 4.9 shows that Training and Development practices on construction projects performance which is filled by professional stakeholder's respondents, regarding Jimma town construction projects organization, are successful in implementing training and development programs are returned by respondents are neutral; mean score value 3.2 and 0.98 with standard deviation. This indicates that the majority of respondents were dissatisfied with the case described.

Therefore, the average mean value of the training and development practices on construction projects performance of respondents is 3.12 implies that the respondents were undecided or neutral and 0.98 standard deviations. As for respondents' level of understanding about training and development, variable majority of the respondents show their disagreement with the described statement. This means that training and development practices are not given to employees of Jimma town construction projects.

4.3.3. Performance Appraisal practices

Table 10: Respondent's response on employee perception about Performance Appraisal

No	Variables	Mean	Standard deviation
1	The performance evaluation system in the JTCP organization is serving its purpose.	3.71	0.79
2	The performance evaluation in construction projects to improve job performance	3.71	1.13
3	Good performers get promoted first	3.94	0.87
4	A positive performance appraisal leads to rewards	3.89	0.90
5	Immediate action when employees lack the capacity	3.34	1.14
6	Employees are provided performance-based feedback and counseling	3.49	1.04
Average mean and SD value		3.68	0.98

Table 4.10 shows that responses of professional stakeholders about Performance Appraisal practices, regarding the performance evaluation system in JTCP organization are serving its purpose the respondents have a mean value of 3.71 and 0.79 standard deviations.

The performance evaluation in construction projects organization helped to improve job performance, the respondents have a mean value 3.71 and 1.13 Standard deviation, respondents understanding good performers get promoted first have a mean value 3.94 and 0.87 with Standard deviation, A positive performance appraisal leads to rewards of the respondents have a mean value 3.89 and 0.90 standard deviations, on immediate action when employees lack capacity, the respondents have a mean value 3.34 and 1.14 standard deviation, and also Employees are provided performance-based feedback and counseling understand by the respondents have a mean value 3.49 and 1.04 standard deviation. As for respondents' level of understanding about performance appraisal, variable majority of the respondents show their agreement with the described statement.

Thus, the averages mean values of employee perception about Performance Appraisal practices of respondents are 3.68 implies that the respondents were agreed and record, 0.98 standard deviations.

4.3.4. Work design practices

Table 4.11: Respondents' response on employee perception about work design practices

NO	Variables	Mean	Standard deviation
1	Designing of work is adopted to progress activities	3.89	0.68
2	Arrangement of work is a core function to successful construction projects performance	4.40	0.74
3	Job design is an effective tool for the enhancement of employees' job satisfaction, the motivation of workers, and ultimately the increase of employees' performance and productivity	4.26	0.89
4	Involved in decision-making at the workplace	4.20	0.76
5	Satisfaction with work to perform well	4.11	0.76
Average mean and SD value		4.17	0.765

Table 4.11 shows that Work design practices on construction projects performance, regarding organization designing of work, are adapted to progress activities of respondents have a mean value of 3.89 and 0.68 standard deviations of agreed by respondents. Arrangement of work is a core function to successful construction projects performance of respondents have a mean value 4.40 and 0.74 standard deviations, Job design is an effective tool for the enhancement of employees' job satisfaction, the motivation of workers, and ultimately the increase of employees' performance and productivity of respondents have a mean value 4.26 and 0.89 standard deviations, & involved in decision-making at my workplace of respondents have a mean value 4.20 and 0.76 standard deviations, and satisfaction with work helps to perform well of respondents have a mean value 4.11 and 0.76 standard deviations.

Hence, the average mean values of the Work design practices on construction projects performance of respondents have a mean value of 4.17 implies that the respondents were agreed and 0.765 standard deviations. As for respondents' level of understanding about work design, variable majority of the respondents show their agreement with the described statement.

4.3.5. Compensation system and reward practices

Table 4.12: Respondent's response on employee perception about compensation system and reward

NO	Variables	Mean	Standard deviation
1	Pay of employees is directly linked to performance.	3.31	1.21
2	Reward system based on performance	3.66	1.03
3	Satisfied with the amount of pay and other benefits I receive	3.09	0.92
4	A good job is noticed and rewarded	3.89	0.98
5	Appreciate rewards and recognition	3.97	0.86
Average mean and SD value		3.58	1.00

The above Table 4.12 shows that Compensation system and reward practices on construction projects performances, regarding the organization, pay of employees is directly linked to the performance of respondents have a mean value 3.31 and 1.21 standard deviation, reward system based on the performance of respondents have a mean value 3.66 and 1.03 standard deviation, Good job is noticed and rewarded of respondents have a mean value of 3.89 and 0.98 standard deviation and also appreciate rewards and recognition of respondents have a mean value 3.97 and 0.86 standard deviations.

Generally, the average mean value of the Compensation system and reward practices on construction projects performances of respondents have a mean value of 3.58 implies that the respondents were agreed and 1.00 standard deviation.

According to study results, Compensation and reward system are used to retain, motivate, and attract the employees of construction projects and also providing reward for employees of good performance in his works very essential if the system is practiced.

4.4. Construction project performance

Table 4.13: Respondent's response on construction project performance

No	Variable	Mean score	Standard deviation
1	Tasks performed within the expected time	4.94	0.24
2	Performed within the expected budget	4.77	0.43
3	Improvement of quality	4.54	0.51
4	Performance of task productivity/output	4.60	0.74
5	Customer satisfaction	4.37	0.81
Average mean and SD value		4.64	0.54

The above Table 4.13 shows that the respondents strongly agree that the construction project was performed by considering the above cost, quality, time, productivity, and customer's satisfaction with the mean value of 4.64. Therefore, the performance of a construction project depends on its accomplishment, which is measured base on timely completion, within the budget, required quality standard, and customer satisfaction.

4.5. Relationship between HRM practices and construction Project performance

As shown in the below Table 4.14, based on a survey of 35 respondents from the construction project sector in Jimma, a bivariate Pearson product-moment correlation analysis is run and shows the following result:

The relationship between construction projects' performance and HRM practices (recruitment and selection, training and development, work design, compensation and reward system, performance appraisal, and management) was investigated using the Pearson r correlation coefficient. The results show that there was a strong, positive correlation among work design, compensation system, and training and development variables. But, corresponding variables like recruitment and selection, and performance appraisal the results shows that there was a moderate and positive relationship. It is find out that between construction projects performance and recruitment and selection perceived value ($r = 0.633$, $N= 35$, $p<0.01$), between construction projects performance and training and development perceived value ($r = 0.793$, $N = 35$, $p<0.01$) and construction projects performance and work design perceived value ($r = 0.844$, $N = 35$,

$p<0.01$). In addition to that the relationship between construction projects performance and compensation system perceived value ($r = 0.804$, $N = 35$, $p<0.01$); construction projects performance and performance management perceived value ($r = 0.651$, $N = 35$, $p<0.01$). The relationship between HRM practice and construction project performance was studied using two-tailed Pearson correlation analysis. This provided correlation coefficients which indicated the strength and direction of relationship. The p-value also indicated the probability of this relationship's significance.

On the other hand, based on the Pearson correlation test all the remaining variables i.e. recruitment and selection, training and development, work design, compensation and reward system, and performance appraisal and management have moderate and strong significant correlation results at a 1% significant level. Therefore, it can be concluded that construction projects' performance depends on HRM practices.

Table 4.14: Correlation analysis between HRM practices and construction projects performance

Correlations							
		CPP	S &R	T&D	WD	C&R	PA/M
Construction project performance	Pearson Correlation	1	.633**	.793**	.844**	.804**	.651**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	35	35	35	35	35	35
Selection and recruitment	Pearson Correlation	.633**	1	.802**	.820**	.801**	.887**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	35	35	35	35	35	35
Training and development	Pearson Correlation	.793**	.802**	1	.836**	.832**	.805**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	35	35	35	35	35	35
Work design	Pearson Correlation	.844**	.820**	.836**	1	.955**	.886**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	35	35	35	35	35	35
Compensation & reward	Pearson Correlation	.804**	.801**	.832**	.955**	1	.879**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	35	35	35	35	35	35
Performance appraisal/ management	Pearson Correlation	.651**	.887**	.805**	.886**	.879**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	35	35	35	35	35	35
**. Correlation is significant at the 0.01 level (2-tailed).							

Based on above Table 4.14, discussion of the correlation analysis results on HRM practices and construction project performance are summarizes as below.

4.5.1. Recruitment and selection with construction project performance.

Pearson Correlation test was conducted to know whether there is significant correlation or not between recruitment and selection, and construction project performance. As it is clearly indicated on the above Table 4.14, there is moderate positive correlation between recruitment and selection, and construction project performance. The result of correlation analysis prove that recruitment and selection, and construction project performance are correlated with a moderate relationship ($r = 0.633$, $N=35$, $p < 0.01$).

4.5.2. Training and development with construction project performance

Pearson correlation test was conducted to know whether there is significant correlation or not between training and development with construction performance. As it is clearly indicated on the above Table 4.14, there is strong positive correlation between training and development with construction project performance. The result of correlation analysis prove that training and development with construction project performance are correlated with strong relationship (r 0.793, $N=35$, $p < 0.01$).

4.5.3. Work design and construction project performance.

Pearson correlation test was conducted to know whether there is significant correlation or not between work design and construction project performance. As it is clearly indicated on the above Table 4.14, there is strong positive correlation between work design and construction project performance. The result of correlation analysis prove that work design and construction project performance are correlated with strong relationship ($r = 0.844$, $N= 35$, $p < 0.01$).

4.5.4. Compensation and reward system, and construction project performance.

Pearson correlation test was conducted to know whether there is significant correlation or not between compensation and reward system, and construction project performance. As it is clearly indicated on the above Table 4.14, there is strong positive correlation between compensation and reward system, and construction project performance. The result of correlation analysis prove

that compensation and reward system, and construction project performance are correlated with a strong relationship (r) = 0.804, N=35, $p < 0.01$).

4.5.5. Performance appraisal and construction project performance.

As displayed in the above Table 4.14, Pearson Correlation was computed so as to determine whether there are significant relationships between performance appraisal and construction project performance. Thus, the result of the table illustrates there is moderate positive relationship between performance appraisal and construction project performance. The result of correlation analysis prove that performance appraisal and construction project performance are correlated with a moderate relationship ($r = 0.651$, N=35, $p < 0.01$).

4.5.6. Summary of relationships/correlations

Correlation analysis aimed to establish the relationship among the independent variables (recruitment and selection, training and development, work design, compensation and reward system and performance appraisal) and the dependent variable (construction project performance). Pearson correlation coefficient analysis for all variables was performed. From the above Table 4.14, the highest correlation ($r= 0.844$, N=35 $p < 0.01$), was between work design and organizational performance, followed by the association ($r= 0.804$, N =35, $p < 0.01$) between compensation and reward system and construction project performance, training and development, and construction project performance ($r= 0.793$, N=35, $p < 0.01$), performance appraisal and construction project performance ($r = 0.651$, N=35, $p < 0.01$); and recruitment and selection, and construction project performance ($r = 0.633$, N=35, $p < 0.01$).

4.6. Results of Key factors affecting human resource management practices on construction project performance

Some factors influence Human resource management practices at a greater level on construction project performance. Although, Those key factors of HRM practices that influence construction project performance which given by respondents are personal problems, rework, Contractual conflict, Poor communication, Lack of required construction materials, Lack of government commitment, Delay, Size of the projects, design change, and external factors are influencing the

performances of construction projects. These factors were identified based on interview study and analysis using the below figures.

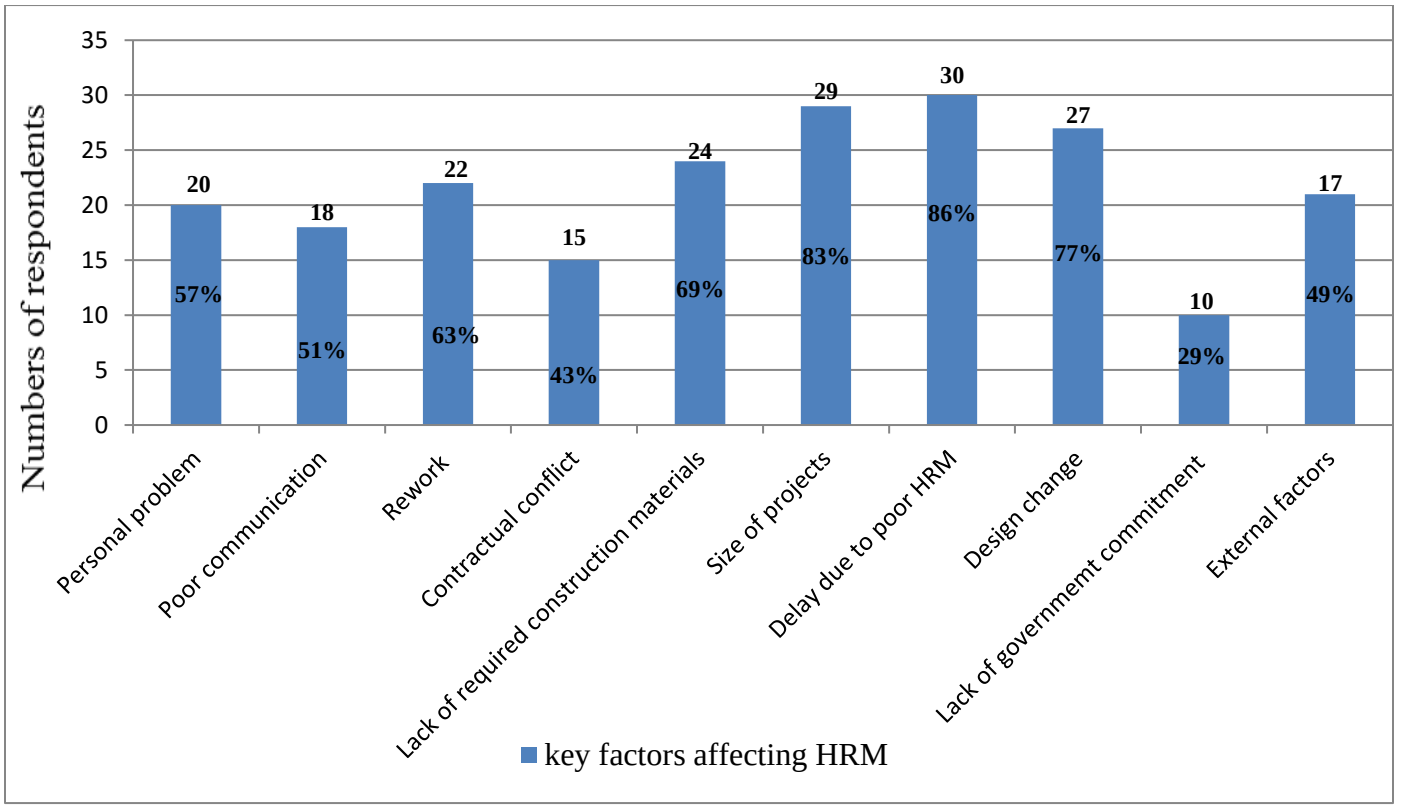


Figure 4.4 key factors affecting HRM on construction project performance

From the above figures 4.4, most of 86% of respondents agreed on delay influences HRM practices on construction project performance and, also 83% of respondents decided sizes of project have high issue on HRM practices, means that most of the respondents point to the complexity of project as the main reason for human resource management practices problems. Regarding material factors, lack of required construction materials occurs in some companies. 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. External Factors are Political problems and often aroused in firms and due to this work schedule is disturbed. In some firms, resources are managed improperly whereas in partnership-based firms contractual conflicts are found, and also COVID-19 was one of the external factors that affect the work schedule of the workers of construction projects, and it is the current problem that hanged employees from their work sites. According to respondents, Environmental Factors is very clear to mention that climatic condition and site

condition will disturb the working performance which included in external factors. Design factors are including design problems, and design errors happened, so 77% of respondents agreed on the occurrence of design change.

According to above figure 4.4, the key factors like that of delay due to poor HRM (86%), size of projects (83%), design change (77%), and lack of required construction materials (69%) mostly affect human resource management practices on construction projects performance and rated based on respondents response. Other factors are also; influence the performance of construction projects. Based on respondent's response, the key factors of human resource management practices are ranked as delay (86%), size of project (83%), and design change (77%), lack of required construction material (69%), rework (63%), personal problem (57%), poor communication (51%), external factors (60%), contractual conflict (43%), and lack of government commitment (29%). From study results, delay is the most factors affecting HRM practices on the performance of construction project and ranked as highest factors. But, the lack of government commitment is the lowest rank from all factors of human resource management practices.

According to the findings of the study human resource management practices factors are strong influences on construction projects performance.

Depending on the study of the effects of human resource management practices on construction project performance summarizing the findings and address an overview of impacts of HRM practices and their different potential advantages and drawbacks are:-

Table 4.15: Impacts of HRM practices on construction projects

Positive impacts	**Negative impacts**
Good management of the workers	Recruitment of unskilled personnel
Facilities at the workplace (availability of construction materials)	Lack of motivation
Bonus	Poor communication
Good health & safety condition	Lack of training
A high amount of payment	Lack of safety knowledge and training
Good relation between labor	Absenteeism of construction workers at worksites

Good working disciplines	Misunderstanding between workers
Achievement of organizational objectives	Lack of labor safety
Cost-effectiveness	Poor management of project manager
Better time management	Poor skill workers
Quality of services improved	Inspection delay
Improvement in decision-making	Low leadership skill of project engineers
Improvement of the communication within the company	Increase in turnover
Productivity improvement	The complexity of project structure and difficulty in its use

As shown in the above Table 4.15, the human resource management practices have positive and negative impact on construction project performance. The factors that mentioned under negative impacts are the unskilled employee, lack of motivation, Absenteeism of construction workers at work sites, poor communication, and increase in turnover are lead to poor performance on construction projects, but the positive impacts such as Good management of the workers, bonus, Good health & safety condition, availability of materials, Cost-effectiveness, better time management, Quality of services improved, Productivity improvement, Achievement of organizational objectives are lead good performance on construction projects. Therefore, the factors of human resource management are influencing construction projects' performance.

An effective Human Resources Management (HRM) will result in a highly motivated workforce leading to high productivity, quality improvement and minimizes cost and time overruns. Effective recruiting and selection processes lead to better company results. Work design arrangements are essential to perform and succeed in the projects and creating work methodology may improve performance. Performance management seeks to evaluate the output of work. Effective performance management practices may increase the output/productivity of construction projects.

Finally, the respondents to enter some potential solutions to fill the gap in the Jimma town construction projects. Each respondent was given entries for writing his view of the solution: Apply modern project management software RFID, RTLS, & GPS to controlling human resources, Stakeholders' collaboration or building project team, Experience sharing and

information addressing, Training, Application of construction management practices, Modify regulations set by the government, and Build capacities of all stakeholders.

According to study results, to improve human resource management structure and system in the construction industry, Human Resource Management practices are being developed and implemented as it is vital to the effective functioning and the performance of projects in the construction industry.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1. Conclusion

Under this study, the major Human resource management practices are identified and three research questions were developed and addressed in this research and all the dimensions expect training and development practices were rated between 3.5 and 4.5 but, regarding the training and development practices on construction projects performance, respondents have noted the average mean value of 3.12 implies that the respondents were undecided or neutral with described statements.

The Pearson correlation test the results show there was a strong and positive correlation among work design, compensation system, and training and development variables. However, corresponding variables like recruitment and selection, and performance appraisal the results shows that there was a moderate and positive relationship at a 1% significant level. Therefore, Human resource management (HRM) practices have a positive significant relationship with construction projects performance.

From study results, delay is the most factors affecting HRM practices on the performance of construction project and ranked as highest factors but, the lack of government commitment is the lowest rank from all factors of human resource management practices. According to the findings of the study human resource management practices factors are strong influences on construction projects performance.

All the respondents in the questionnaires and the interview had agreed that HRM practices were important for the performance of construction projects.

The study shows that the respondents strongly agree that the construction project was performed by considering cost, quality, time, productivity, and customers with a mean value of 4.64. Therefore, the success of a construction project depends on its performance, which is measured based on timely completion, within the budget, required quality standard, and customer satisfaction.

Regarding construction project performance the interviewee replay, if the construction organization appropriately applies for the HRM program the employees can improve their capacity and it also enhances employee's commitment towards the construction companies.

The study shows that to improve human resource structure and system in the construction industry, Human Resource Management practices are being developed and implemented as it is vital to the effective functioning and the success of projects in the construction industry.

All of the findings had a significant and positive impact on the performance of construction companies that were studied.

In modern human resource management practices, the Human Resource Management System (HRMS) interconnects human resource management (HRM) and information technology for the reduction of the workload of managers and automate their administrative activities.

5.2. Recommendation

Based on the findings and results of this study, the following recommendations are put forward:

- Even though this study tried to identify and analyze human resource management practice but, training and development practices missing in construction project companies, and it would need the practices of training and development program to achieve organization objectives.
- The study finally wants to determine key human resource management factors that influence construction project performance.
- Effective and efficient human resource management practices should be used by construction companies to gain competitive construction project performance.
- Government bodies should prepare training and development programs for employees/workers of construction projects. And also, it would be better if the company prepare construction training courses and some expenses.
- The project manager should be pay attention to human resource management practices to achieve organization objectives.
- The management team should enhance policies to motivate the laborers and staff and develop new programs to enhance the policies.
- The results of the research can provide proof and insights and encourage construction firms to implement effective HRM practices to improve construction project performance in the future.
- Companies should practice modern human resource management by using HR technology, RFID, RTLS, & GPS database to improve the performance of construction projects.

REFERENCE

Adewole, Oluwole, and Gabriel, (2016), RFID and RTLS-Based Human Resource Monitoring System, British Journal of Mathematics & Computer Science 14(4): 1-14, Article No.BJMCS.23433 ISSN: 2231-0851

Alagaraja M. (2013), HRD and HRM Perspectives on Organizational Performance: A Review of Literature, "Human Resource Development Review", No. 12(2).

Ali, H., & Aroosiya, M. (2012). Impact of job design on employees' performance. Retrieved fromhttp://www.kln.ac.lk/fcms/ICBI2012/images/ICBM/dccs/Microsoft%20Word%20-%20HRM013.pdf

Armstrong, Michael. (2006). A Handbook of Human Resource Management Practice (10th ed.) [Online] Available: http://en.wikipedia.org/wiki/Human_resource_management

Armstrong, M. (2010), "Armstrong's essential human resource management practice – A guide People management", US Kogan Page Limited.

Bassioni, H. A. (2004). "A Framework for Measuring Business Performance in Construction Contracting Organizations," Published PhD thesis, Lough borough University, Lough borough, UK.

Burke, L. A., & Hsieh, C. (2005). Operationalizing the strategic net benefit (SNB) of HR. Journal of Human Resource Costing and Accounting

Bourn, M., Mills, J., Wilcox, M., Neely, A. & Platts, K. (2000). "Designing, Implementing and Updating Performance Measurement Systems," International Journal of Operation and Production Management, 20(7), 754– 771.

Byras & Rue. (2006). Human resource management, Irwin/McGraw-Hill, P.2000-512.

Chukwuemeka, E. O. (2016). Public Administration. Elyn: HRV publishers

Dardari D, Raffael D, Roblin C, Sibille A, Win MZ. Ultrawide bandwidth RFID: The next generation? Proceedings of the IEEE. 2010;98:9.

George JF. Computer-based monitoring: Common perceptions and empirical results. Journal of Business Quarterly (Online). 2006;20:1. Accessed on 1st April, 2014.

Imran Haider Naqvi1*, Syed Haider Ali Bokhari1, Shazia Aziz1 and Kashif-ur-Rehman. (2011). The impact of human resource (HR) performance management on project outcome African Journal of Business Management Vol. 5(21), pp. 8491-8499.

Kock, R., & Burke, M. (2008). Managing talent in the South African public service. Public Personnel Management, 37(4), 457 – 470.

Kaviya. B., Hema. C., (2015). Performance Management in Construction. International Journal of Innovative Research in Science, Engineering and Technology (An ISO 3297: 2007 Certified Organization) Vol. 4, Issue 4.

Kidwell RE, Kidwell LA. Evaluating research on electronic surveillance: A guide for managers of information technology. Industrial Management and Data Systems (Online). 1996;96:1.

Accessed on 30th March 2014. Available: http://web1.infotrac.galegroup. Com/ itw/.n=88!xrn_2_0_A18542096?

Levy, D. (2000). Whistleblowing in new global political economy. Journal of social science.

Loosemore, M. (2000) Crisis Management in Construction Project, American Society of Civil Engineers press, New York.

Loosemore, M., Dainty, A. and Lingard, H. (2003). Human resource management in construction projects: strategic and operational approaches. spon press, London and new york.

Malkani* Z.A.K. and Kambekar** A.R. (2013). International Journal of Engineering Research and Technology, ISSN 0974-3154 Volume 6, (3), pp. 353-362.

Minbaeva, D. (2005). HRM practices and MNC knowledge transfer. Personnel review, 34, p. 125-144. http://dx.doi.org/10.1108/00483480510571914.

Mishra JM, Crampton SM. Employee monitoring: Privacy in the workplace? SAM Advanced Management Journal. 1998;63(3):4-11. Accessed on 30th March 2014.

Morrell, K., Loan-Clarke J. and Wilkison A. (2004). organizational change and employee turnover ‘, personnel review , 33, 161-173.

Muneer M. I. Abuazoom, Hanizun Bin Hanafi, Zul Zakiyuddin Bin Ahmad. (2017). International Journal of Academic Research in Business and Social Sciences, Vol. 7, No.3 ISSN: 2222-6990.

Noe, R., Hollenbeck, J., Gerhart, B. and Wright, P. (2010). Human Resource Management: Gaining a Competitive Advantage. 7th Ed. McGraw-Hill.

Odediran, S. J., Adeyinka, B. F., Opatunji, O. A. & Morakinyo, K. O. (2012). “Business Structure of Indigenous Firms in the Nigerian Construction Industry,” International Journal of Business Research & Management (IJBRM), 3 (5), 255-264.

Pfeffer, J. (1998). The human equation: Building profits by putting people first. Boston, MA:

Harvard Business School Press.

Smallwood & Venter, (2001). Performance Management in Construction. International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 05 Issue: 01 | Jan-2018 www.irjet.net p-ISSN: 2395-0072.

Townsend, K., Wilkinson, A., Allan, C., & Bamber, G. (2012). Mixed signals in HRM: the HRM role of hospital line managers1. Human Resource Management Journal, 22(3), 267-282.

Turk HN. Questons and answers. Employment Relations Today. 1996;23(1):115. Accessed on 30th March 2014.

Walyee L (2015). Effects of human resource management (HRM) practices on project performance in construction industry. P.1-3.

A. Smith, Training and Development in Australia, Butterworths, Sydney, 1992.

D. Russ-Eft, C. Sleezeer, and H. Preskill, Human Resource Development Review: Research and Implications, Sage, Thousand Oaks, CA, 1997.

R.A. Swanson, and E.F. Holton, Foundations of Human Resource Development, Berrett-Koehler, San Francisco, CA, 2001.

Koch MJ, McGrath RG. Improving labor productivity: Human resource management policies do matter. Strategic Management Journal. 1996;17:335–354.

Xenakis JJ. Every move you make. The Magazine for Senior Financial Executives (Online). 1998;14(6):23. Accessed on 30th March 2014.

Pagnattaro MA. Getting under your Skin-literally: RFID in the employment context; 2008. Accessed on 11th November, 2013.

Yankov, L., & Kleiner, H.B. (2001). Human resources issues in the construction industry. Management Research News, 24(3/4), 101-105.

ANNEXES

QUESTIONNAIRES

Jimma University

Jimma institute of technology

Faculty of civil and environmental engineering

Department of civil engineering

MSc program

SECTION 1: INTRODUCTION

Dear respondent,

I am a graduate student of MSc in the department of civil engineering of construction engineering and management stream, Jimma University, institute of technology, faculty of civil and environmental engineering.

By now, I am undertaking a research entitled 'Effects of human resource management practices on construction projects performances in Jimma town ' so that you are one of the respondents selected to participate by giving appropriate and full information on this study. Please be responsible and help me in giving appropriate and full information to present a real representative result on the existing situation of the effects of human resource management practices on construction project performance in Jimma town. Your participation in responding the questions is entirely voluntary and the questionnaire is completely anonymous.

At the end, I prove you that the information that you give me will be kept confidential and only used for the academic research purpose. No individual's responses will be specified as such and the unique identity of persons responding will not be announced or released to anyone.

You have great thanks for your kind cooperation and giving your time.

With regards,

Dechasa Dasalo Shone

SECTION TWO: GENERAL QUESTIONS

 Please Mark by "√''

1. What is Your Position in the Organization?

Project Manager ☐ Site engineer ☐ Consultants ☐

Technical Expert ☐ Manager Administration & H.R. ☐

Team Leader ☐ Client/owner ☐ Contractor ☐

2. Number of years you have been working in the organization

<2 years ☐ More than 5 years ☐ 2-5 years ☐

3. The highest level of education you have accomplished

Diploma ☐ MA/MSc ☐

BA/BSc ☐ PHD ☐

4. Your educational Background /Field of study ----------

5. Total number of projects you have been involved in your Organization during the past three years?

<3 ☐ 5-7 ☐

3-5 ☐ >7 ☐

6. Which role do you have in your organization with respect to construction projects?

Day-to-day supervision of ongoing construction projects ☐

Design development/Preparation ☐

Project Monitoring /controlling supervision ☐

Project Cost planning/budgeting Management ☐

Procurement planning, bid evaluation ☐

Overall responsible for construction related in-coming, in-process, final inspection & testing activities ☐

Other please specify----------

SECTION THREE: HUMAN RESOURCE MANAGEMENT PRACTICES ON CONSTRUCTION PROJECTS PERFORMANCE

Annex 1: Table's shows the major human resource management practices are listed below. Please indicate the level of degree to which these factors on construction project performance. After you read each of the variables, evaluate them in relation to your construction projects and put then a tick mark (√) under the choices below. Where, **5=strongly agree, 4= agree, 3= neutral, 2= disagree and 1= strongly disagree.**

No	HRM practices	5	4	3	2	1
1.	Selection and recruitment					
2.	Training and development					
3.	Performance appraisal/ management					
4.	Work design					
5.	Compensation / reward					

Annex 2: Table shows awareness towards the concepts of HRM

I	Awareness towards the concepts of HRM	5	4	3	2	1
1	I am aware of training and development from HRM point of view					
2	I know career planning and development as crucial part of HRM					
3	I acquainted with organizational development from HRM standpoint					
4	I familiar with performance appraisal from HRM point of view					

Annex 3: Table for on employee perception about recruitment and selection

II	Employee perception about recruitment and selection	5	4	3	2	1
1	Recruitment and selection system of Jimma town/your construction project is effective for organizational goal					
2	Competencies required to different job positions are used in recruitment process					

3	The placement of new entrants is done as per the organizational goal					
4	Regarding internal recruitment I find the process is effective in identifying the best people for the job					

Annex 4: Table for Employee perception about Training and Development

III	**Employee perception about Training and Development**	**5**	**4**	**3**	**2**	**1**
1	Jimma town construction projects organization are successful in implementing training and development programs					
2	Jimma town construction projects organization are committed to build the capacity of its employees					
3	Employees in this organization participate in determining the training they need.					
4	There are formal training programs to teach new employees the skills they need to perform their jobs					
5	Employees returning from training are given adequate free time to reflect and plan improvements in the organization.					

Annex 5: Table shows employee perception about Performance Appraisal

IV	**Employee perception about Performance Appraisal**	**5**	**4**	**3**	**2**	**1**
1	The performance evaluation system in JTCP organization is serving its purpose.					
2	The performance evaluation in construction projects improve job performance					
3	Organization good performers get promoted first					
4	A positive performance appraisal leads to rewards					
5	Immediate action when employees lack capacity					
6	Employees are provided performance based feedback and counseling					

Annex 6: Table shows employee perception about work design

V	*Employee perception about work design*	5	4	3	2	1
1	Designing of work is adopted to progress activities					
2	Arrangement of work is core function to success construction projects performance					
3	Job design is an effective tool for the enhancement of employees' job satisfaction, motivation of workers, and ultimately the increase of employees' performance and productivity					
4	Involved in decision-making at workplace					
5	Satisfaction with work to perform well					

Annex 7: Table shows employee perception about compensation system and reward

VI	*Compensation system and reward*	5	4	3	2	1
1	Pay of employees is directly linked to performance.					
2	Reward system based on performance					
3	Satisfied with the amount of pay and other benefits I receive					
4	Good job is noticed and rewarded					
5	Appreciate rewards and recognition					

Annex 8 Table shows employee perception about Construction project performance

No	***Construction project performance***	**5**	**4**	**3**	**2**	**1**
1	Tasks performed within the expected time					
2	Performed within the expected budget					
3	Improvement of quality					
4	Performance of task productivity/output					
5	Customer satisfaction					

SECTION 4: INTERVIEW QUESTIONS

1. What are the key HRM factors that affect construction project performance in your organization? Its impacts?

2. How do the HRM practices affect construction performance in your company?

a. How do the recruitment and selection practices affect construction project performances?
b. How the training and development practices do affects construction project performances?
c. How do the work design affects construction project performances?
d. How do the performance management practices affect construction project performance?
e. How the compensation system and reward affect construction project performance?

3. What are the effects of the current HRM practices on construction project of your company?

4. What practices have to adopt to improve HRM in the construction project of your company?

5. Do you think the existing HRM practices contributed to your organization's success? How?

Thank you for your participation and cooperation.